NATIONAL WETLANDS INVENTORY

BIRNEY, MONTANA

30 X 60 MINUTE SERIES (WETLANDS)

107°00'
45°30'

10100099

10090102

10090101

3111L
(III-10)C4b

10090207

106°00'

BIRNEY, MONTANA

1979

30 X 60 MINUTE QUADRANGLE
CONTENTS

- Wetland classifications
- Highways, roads and other
- Water features
- Geographic names

1979

Produced by the United States Fish and Wildlife Service
Wetland classifications from 1:31 680-scale color infrared aerial photographs taken 1976 and other source data

SPECIAL NOTE

CONVERSION TABLE

DECLINATION DIAGRAM

ADJOINING MAPS

1. Hardin
2. Lame Deer
3. Forsyth
4. Custer Creek
5. Birney
6. Ashland
7. Decker
8. Sheridan

MICROFICHE INDEX
BIRNEY (HARDIN SE)

NW	NC	NE
SW	SC	SE

SCALE 1:100 000

KILOMETERS 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
MILES 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

1000 m 10 000 15 000 20 000 25 000 30 000 35 000 40 000 45 000 50 000 55 000 60 000 65 000 20 000 METERS
FEET

SYSTEM
SUBSYSTEM
Class
EXAMPLE

Subclass, water regime *

* Primarily deepwater upland areas but may include unclassified wetlands such as man-modified areas from photo-identifiable vistas and/or environmental limitations

PF or PU Farmed wetlands

Cmnts...Bad water regime

WETLAND LEGEND

M MARINE
1 SUBTIDAL
OW Open Water/Unknown Bottom
RB Rock Bottom
UB Unconsolidated Bottom
AB Aquatic Bed
RF Reef

M MARINE
2 INTERTIDAL
AB Aquatic Bed
RF Reef
FL Flat
RS Rocky Shore
BB Beach Bar

E ESTUARINE
1 SUBTIDAL
OW Open Water/Unknown Bottom
RB Rock Bottom
UB Unconsolidated Bottom
AB Aquatic Bed
RF Reef

E ESTUARINE
2 INTERTIDAL
AB Aquatic Bed
RF Reef
FL Flat
SB Streambed
RS Rocky Shore
BB Beach Bar
EM Emergent
SS Scrub-Shrub
FO Forested

R RIVERINE
1 TIDAL
EM Emergent (Nonpersistent)
OW Open Water/Unknown Bottom
RB Rock Bottom
UB Unconsolidated Bottom
AB Aquatic Bed
FL Flat
SB Streambed
RS Rocky Shore
BB Beach Bar

R RIVERINE
2 LOWER PERENNIAL
EM Emergent (Nonpersistent)
OW Open Water/Unknown Bottom
RB Rock Bottom
UB Unconsolidated Bottom
AB Aquatic Bed
FL Flat
SB Streambed
RS Rocky Shore
BB Beach Bar

R RIVERINE
3 UPPER PERENNIAL
OW Open Water/Unknown Bottom
RB Rock Bottom
UB Unconsolidated Bottom
AB Aquatic Bed
FL Flat
SB Streambed
RS Rocky Shore
BB Beach Bar

R RIVERINE
4 INTERMITTENT
OW Open Water/Unknown Bottom
RB Rock Bottom
UB Unconsolidated Bottom
AB Aquatic Bed
FL Flat
SB Streambed
RS Rocky Shore
BB Beach Bar

L LACUSTRINE
1 LIMNETIC
OW Open Water/Unknown Bottom
RB Rock Bottom
UB Unconsolidated Bottom
AB Aquatic Bed

L LACUSTRINE
2 LITTORAL
OW Open Water/Unknown Bottom
RB Rock Bottom
UB Unconsolidated Bottom
AB Aquatic Bed
FL Flat
RS Rocky Shore
BB Beach Bar
EM Emergent (Nonpersistent)

P PALUSTRINE
NO SUBSYSTEMS
OW Open Water/Unknown Bottom
RB Rock Bottom
UB Unconsolidated Bottom
AB Aquatic Bed
FL Flat
MA Moss/Lichen
EM Emergent
SS Scrub/Shrub
FO Forested

379 411

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

NATIONAL WETLANDS INVENTORY

HARDIN SE
BIRNEY

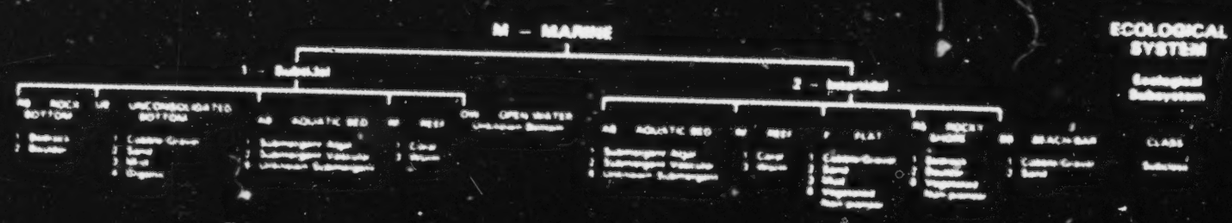
BIRDSEYE SPRINGS, MONT

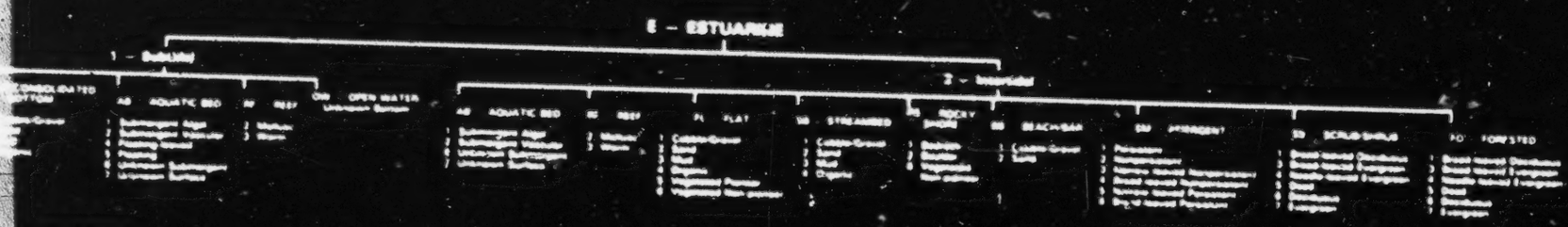
MICROFICHE INDEX
BIRNEY (HARDIN SE)

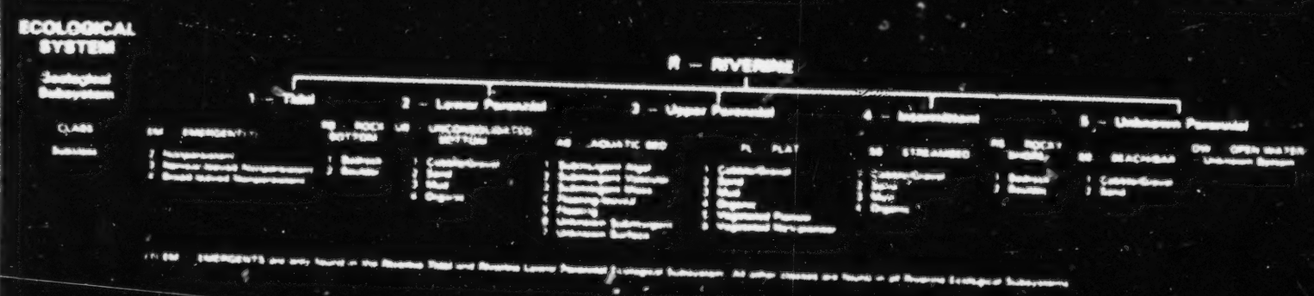
NW	NC	NE
SW	SC	SE

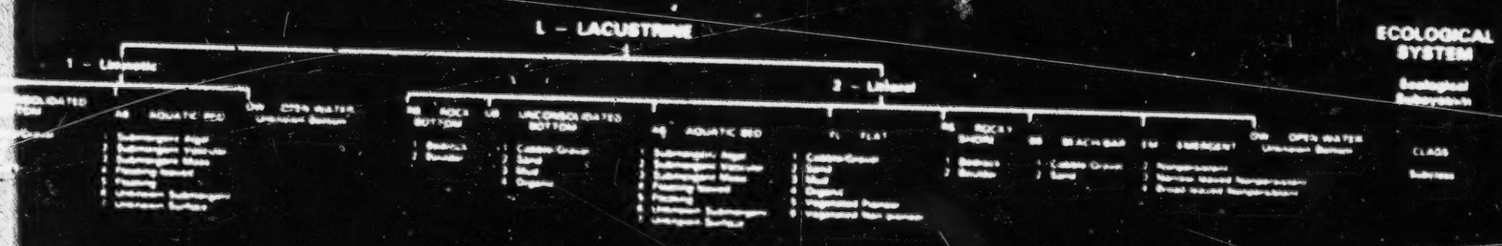
WETLAND LEGEND

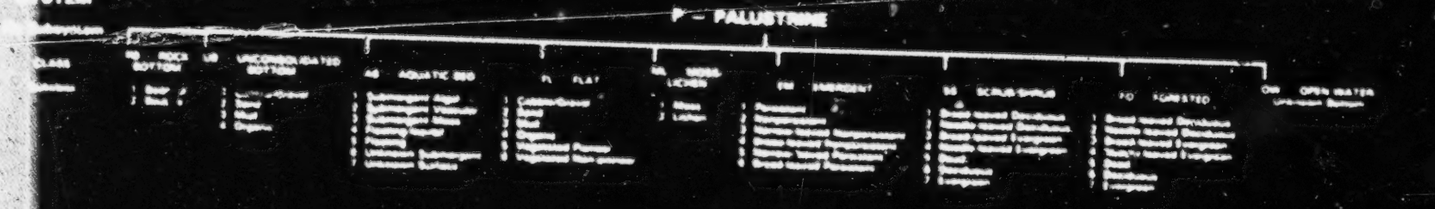
U – Primarily represents upland areas, but may include unclassified wetlands such as man-modified areas, non photo-identifiable areas and/or unintentional omissions.











MODIFYING TERMS

In order to more adequately describe wetland and aquatic habitats one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy. The formed modifier may also be applied to the ecological system.

WATER REGIME(1)	WATER CHEMISTRY	SOIL	SPECIAL MODIFIERS
Tidal	Coastal Salinity	Organic	Beaver
Intertidal	Inland Salinity	Mineral	Partly Drained/Ditched
Subtidal	pH Modifiers for all Fresh Water		Farmed
Permanent	Hyperhaline		Diked/Impounded
Semipermanent	Euhaline		Artificial
Intermittent	Mixohaline (Brackish)		Spoil
Temporary	Polyhaline		Excavated
Saturated		Acid	
Seasonal Tidal		Circumneutral	
Temporary Tidal		Alkaline	
Intermittent Tidal			
Artificial			

(1) Water regime modifiers found on this legend, but not found in the classification system, may be obtained from the above listed source.

SPECIAL NOTE

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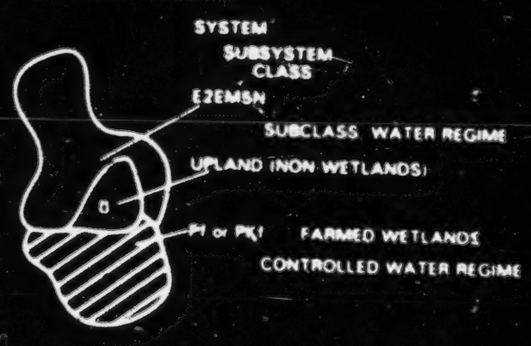
SYMBOLOGY EXAMPLE



NOTES TO THE USER

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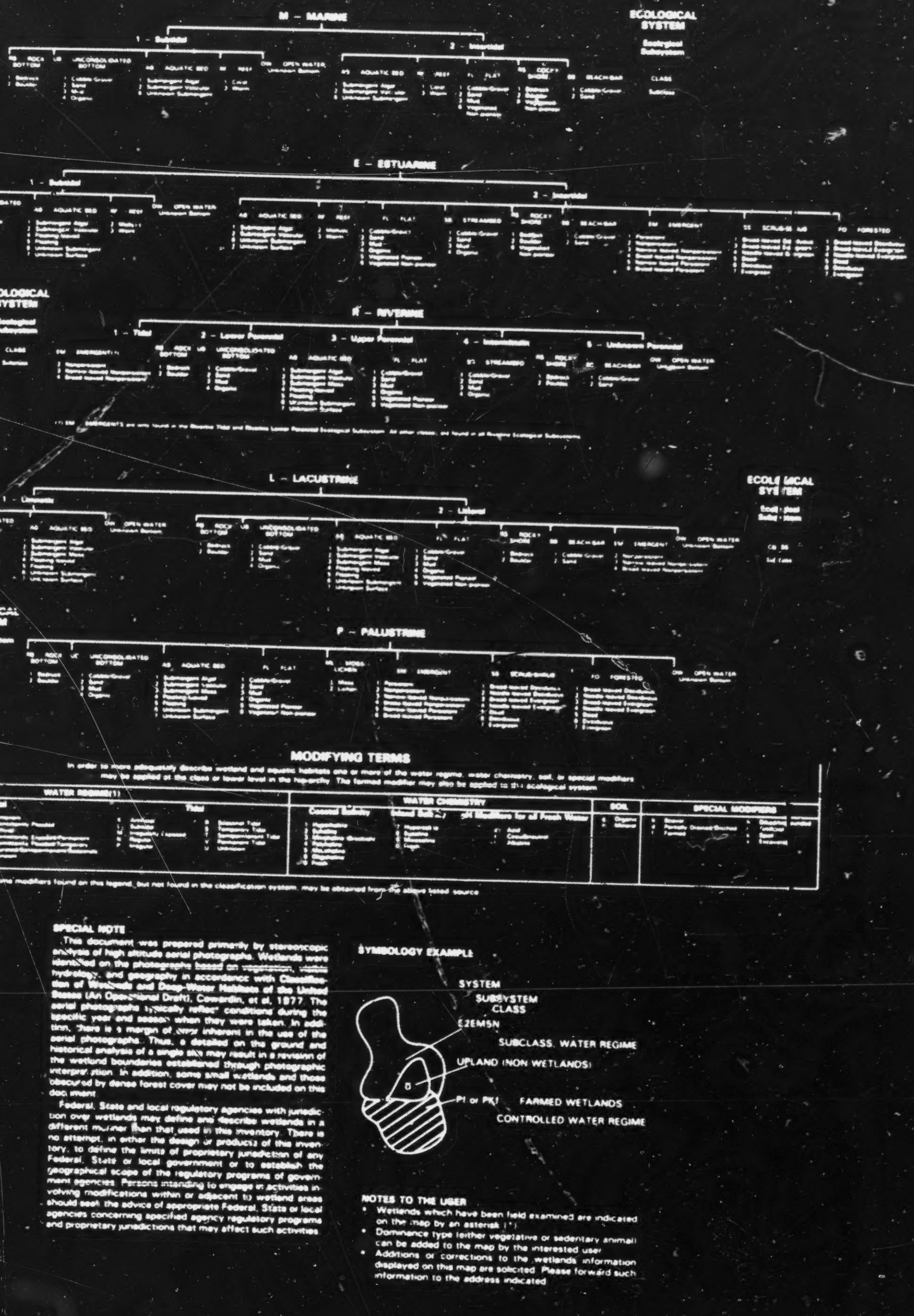
3 7 9 4 1 2

MICROFICHE INDEX
BIRNEY (HARDIN SE)

NW	NC	NE
SW	SC	SE

WETLAND LEGEND

U – Primarily depressions upland areas, but may include unclassified wetlands such as man-modified areas, non photo-identifiable areas and/or unintentional omissions



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WATER REGIMES(1)				WATER CHEMISTRY		SOIL	SPECIAL MODIFIERS	
Non-Tidal		Tidal		Coastal Salinity	Inland Salinity			
A Permanent	G Artificial	R Subtidal	V Diked/Impounded	1 Hyperhaline	5 Hyperhaline	1 Organic	b Beaver	h Diked/Impounded
B Saturated	H Permanently Flooded	S Regularly Flooded	W Farmed	2 Euhaline	6 Eusaline	2 Mineral	d Partly Drained/Ditched	f Farmed
C Seasonal	J Intermittently Exposed	T Irregularly Flooded		3 Mixohaline (Brackish)	7 Mixosaline			
E Saturated/Temporary	K Artificially Flooded	U Temporary Tidal		4 Polyhaline	8 Polysaline			
F Intermittent		Unknown Tidal						

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3 7.9 4 1 3

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

PEM

R20WF

PEM5A

PFL5Ch

PEM5A

R20WF

U

PEM5C

PEM5A

PEM5C

PSS1C

PEM5C

PSS1A

PFO1A

PEM5A

PEM5J

PFL5A

R20WF

PEM1A

PEM5C

PEM1Ch

PEM5Ch

PFL5Ah

PFL5A

PEM5J

U

R20WF

PEM5C

PEM1A

R20WF

PEM5C

PFO5F

PEM5Fh

PFLCh

U

PEM5Ch

HARDIN SE
BIRNEY

POWFh

PEM5A

PFL5Ch

PEM5C

PEM15Ch

FL6Ah

POWFh

PFL5Ch

PEM5Ch

PEM5C

PFL5Ch

PFL5Ch

PEM5Ch

PFL5Ch

ROAD CLASSIFICATION

BIRNEY, MONT.

MICROFICHE INDEX
BIRNEY (HARDIN SE)

NW	NC	NE
SW	SC	SE

c-2

WETLAND LEGEND

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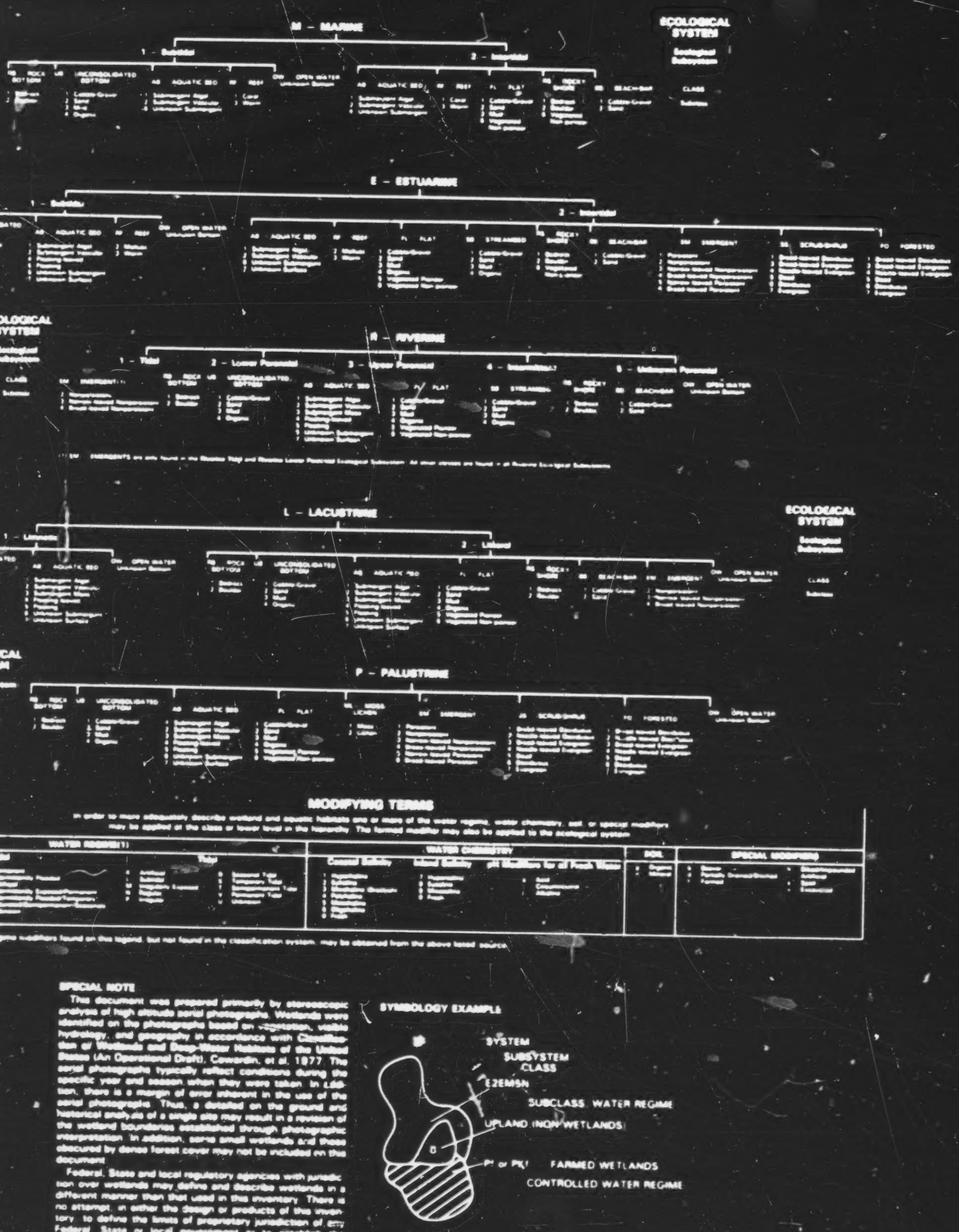

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WATER REGIME(S)	WATER CHEMISTRY	SOIL	SPECIAL MODIFIER(S)
Tidal	Coastal Salinity / Inland Salinity / All Modifiers for all Fresh Water		

Additional regime modifiers found on this legend, but not found in the classification system, may be obtained from the above listed source.

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3 7 9 4 1 4

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

PEM5Ch

POWFh

U

PEM5A

PEM5Ch

PSSIAh

U

PFL5A

PEM5A

POWFh

PEM5J

PEM5B

PFL3C

POWFh

PFL5A

PFL3C

PEM5A

POWFx

PEM5Ah

POWFh

PEM5A

PF01C

PEM5C

PEM5C

U

PEMIC

PEM5Ch

POWFh

PFL5A

PEM5J

PEM5A

PEM5C

PEM5Ch

POWFh

PEM5A

U

PEM5C

PEM5Ch

HARDIN SE

BIRNEY

TAINTOR DESERT, MONT.

WETLAND CLASSIFICATION

MICROFICHE INDEX

BIRNEY (HARDIN SE)

NW	NC	NE
SW	SC	SE

WETLAND LEGEND

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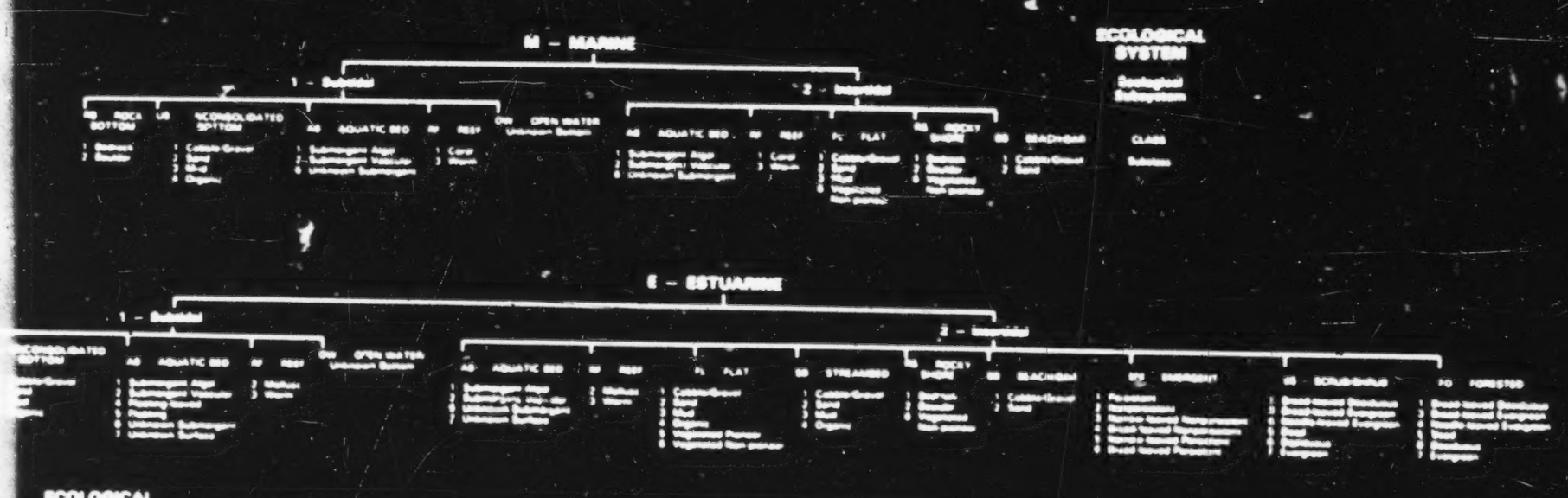

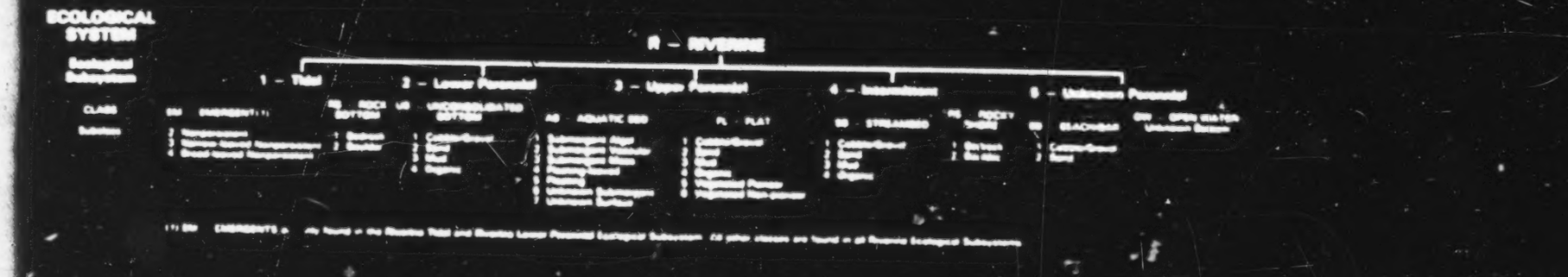

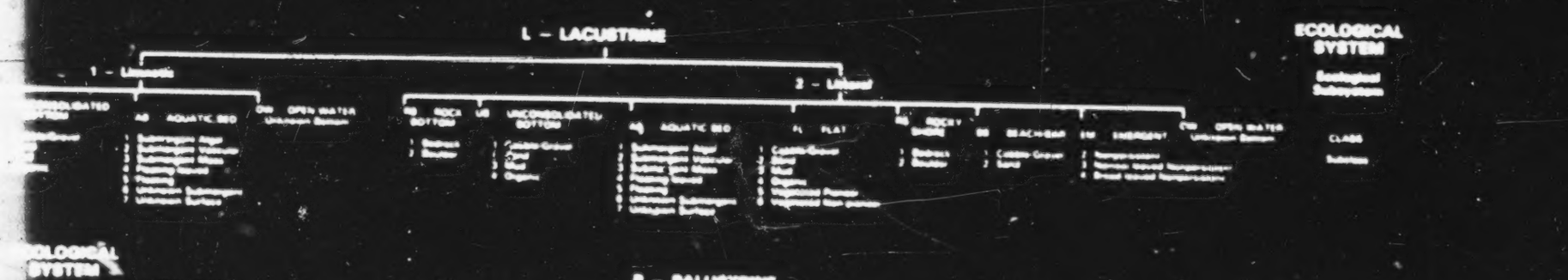

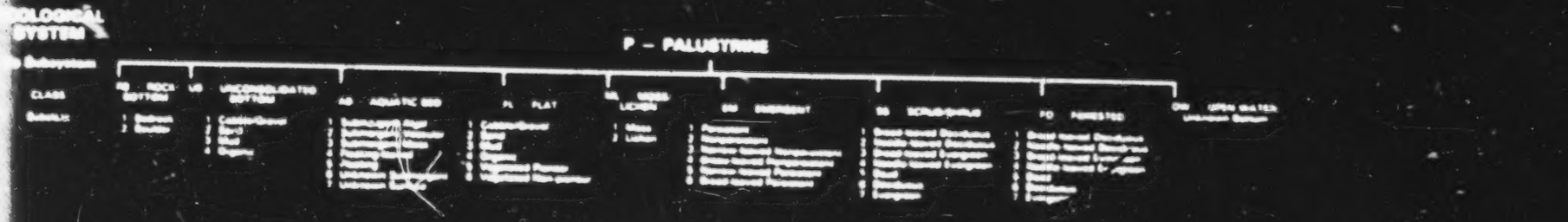

MODIFYING TERMS

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WATER REGIME(1)						WATER CHEMISTRY				SOIL	SPECIAL MODIFIERS		
Non-Tidal		Tidal				Coastal Salinity	Inland Salinity	pH Modifiers for all Fresh Waters					

(1) Water regime modifiers found on this legend, but not found on the classification system, may be obtained from the above listed source.

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SYMBOLOGY EXAMPLE

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379 415

UNITED STATES

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

COOK CREEK BUTTE QUADRANGLE

PFL5D

PFL5J

PEM5J

PEM5C

POWFh

PFL5C

PEM5Ch

PEM5Ah

PEM5B

PEM5Ah

PEM5Ah

PEM5J

PEM5J

PEM5Ch

PEM5Ch

PEM5J

PEM5Ch

PEM5Ch

PEM5J

PEM5Ch

PEM5Ch

WETLAND LEGEND

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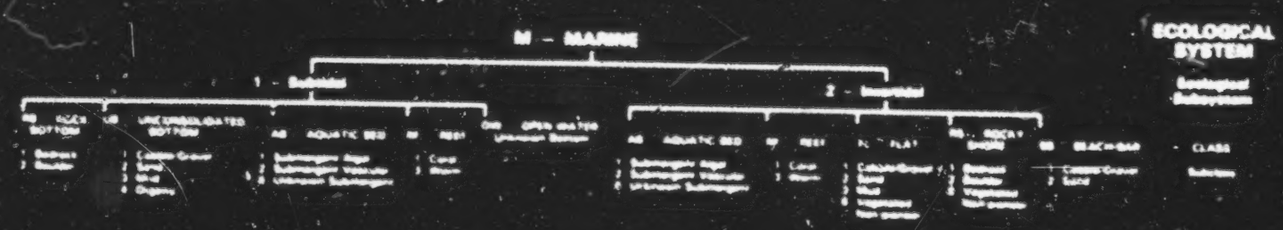

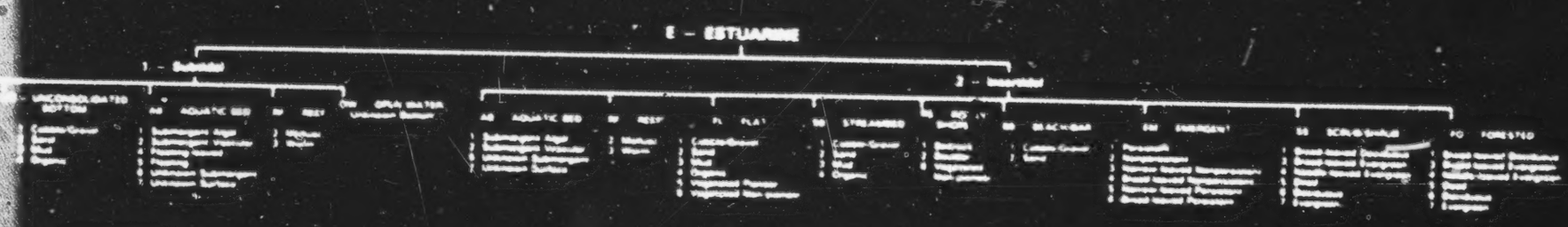

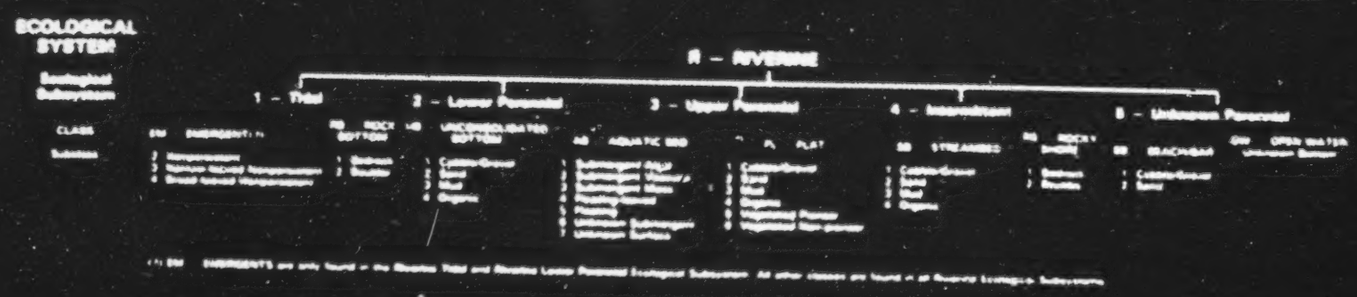

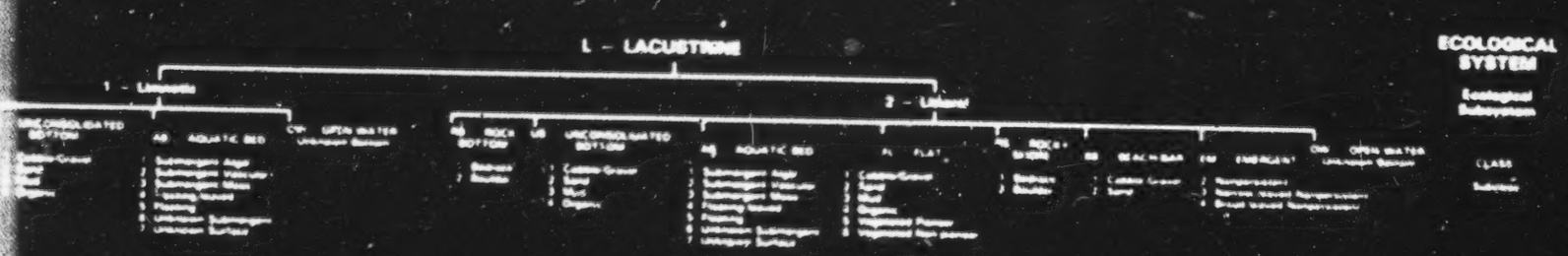

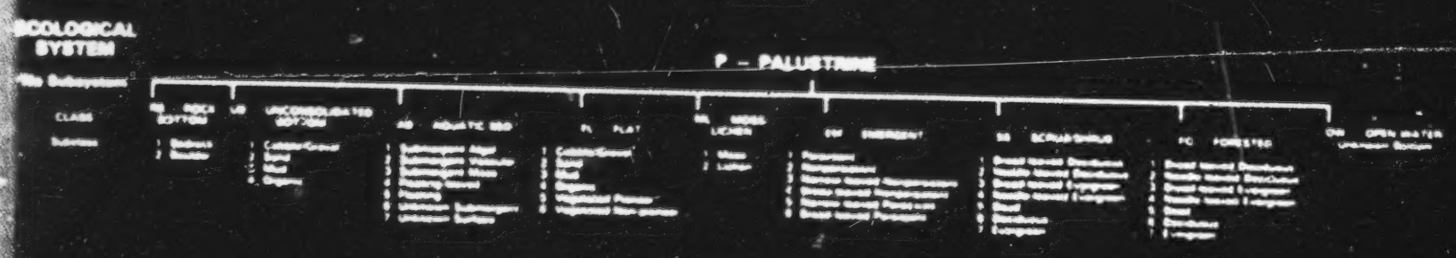

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WATER REGIME(1)			WATER CHEMISTRY			SOIL	SPECIAL MODIFIERS
Non-Tidal	Tidal		Coastal Salinity	Inland Salinity	pH Modifiers for all Fresh Water		
A Permanent B Intermittently Exposed C Artificial D Intermittently Exposed/Permanent E Semipermanent/Seasonal/Temporary F Intermittently Flooded/Temporary G Saturated H Permanently Flooded/Intermittently Exposed J Intermittently Flooded K Artificial L Subtidal M Irregularly Exposed N Regularly Flooded P Irregularly Flooded	R Semipermanent Tidal S Seasonal Tidal T Temporary Tidal U Intermittent Tidal V Permanent Tidal W Unknown Tidal		1 Hyperhaline 2 Euhaline 3 Mixohaline (Brackish) 4 Polyhaline 5 Mesohaline 6 Oligohaline 7 Fresh	1 Hypersaline 2 Eusaline 3 Fresh	1 Acid 2 Circumneutral 3 Alkaline	1 Organic 2 Mineral	1 Saturated 2 Permanently Flooded/Inundated 3 Farmed 4 Diked/Impounded 5 Artificial 6 Spoil 7 Excavated

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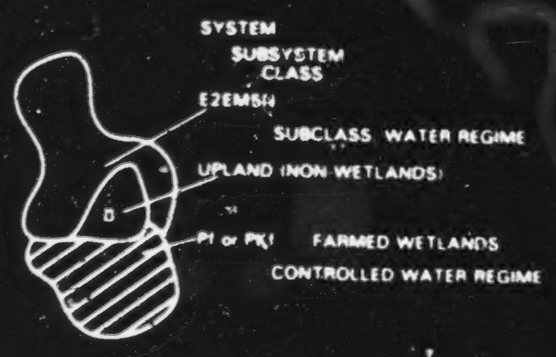
SYMBOLOGY EXAMPLE



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379 420

NATIONAL WETLANDS INVENTORY
UNITED STATES DEPARTMENT OF THE INTERIOR

PEM5A
PEM5A
PEM5J
PEM5A
PEM5A
PEM5J
PEM5J
PSS1A
PEM5A
PEM5Ah
PEM5A
PEMICh
PFOICh
POWFh

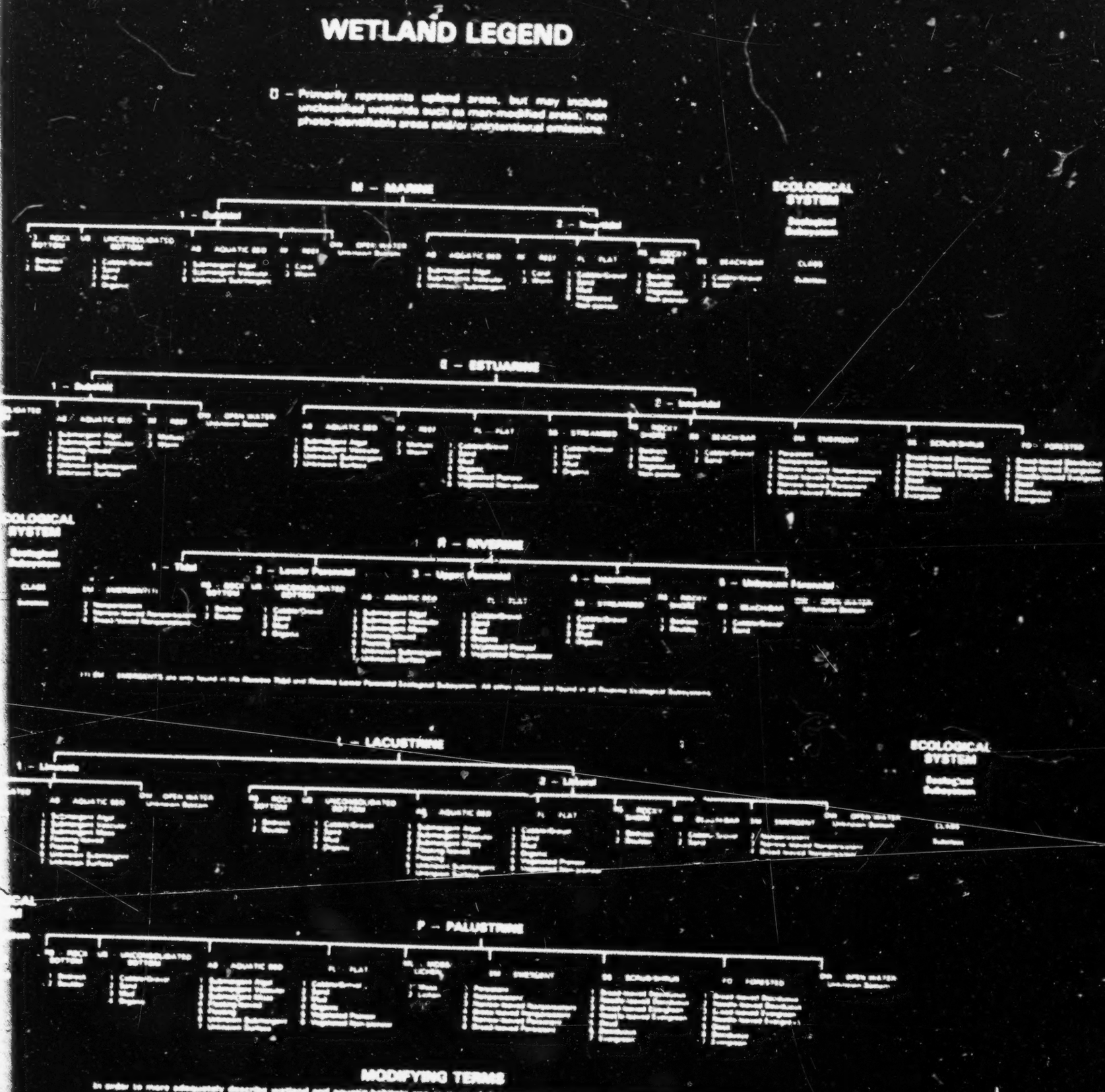
HARDIN SE
BIRNEY

CLINCOCK CREEK, MONT.
ROAD CLASSIFICATION

MICROFICHE INDEX
BIRNEY (HARDIN SE)

NW	NC	NE
SW	SC	SE

WETLAND LEGEND



MODIFYING TERMS

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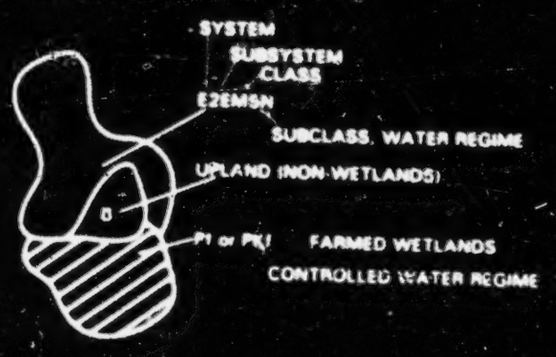
SYMBOLOGY EXAMPLE



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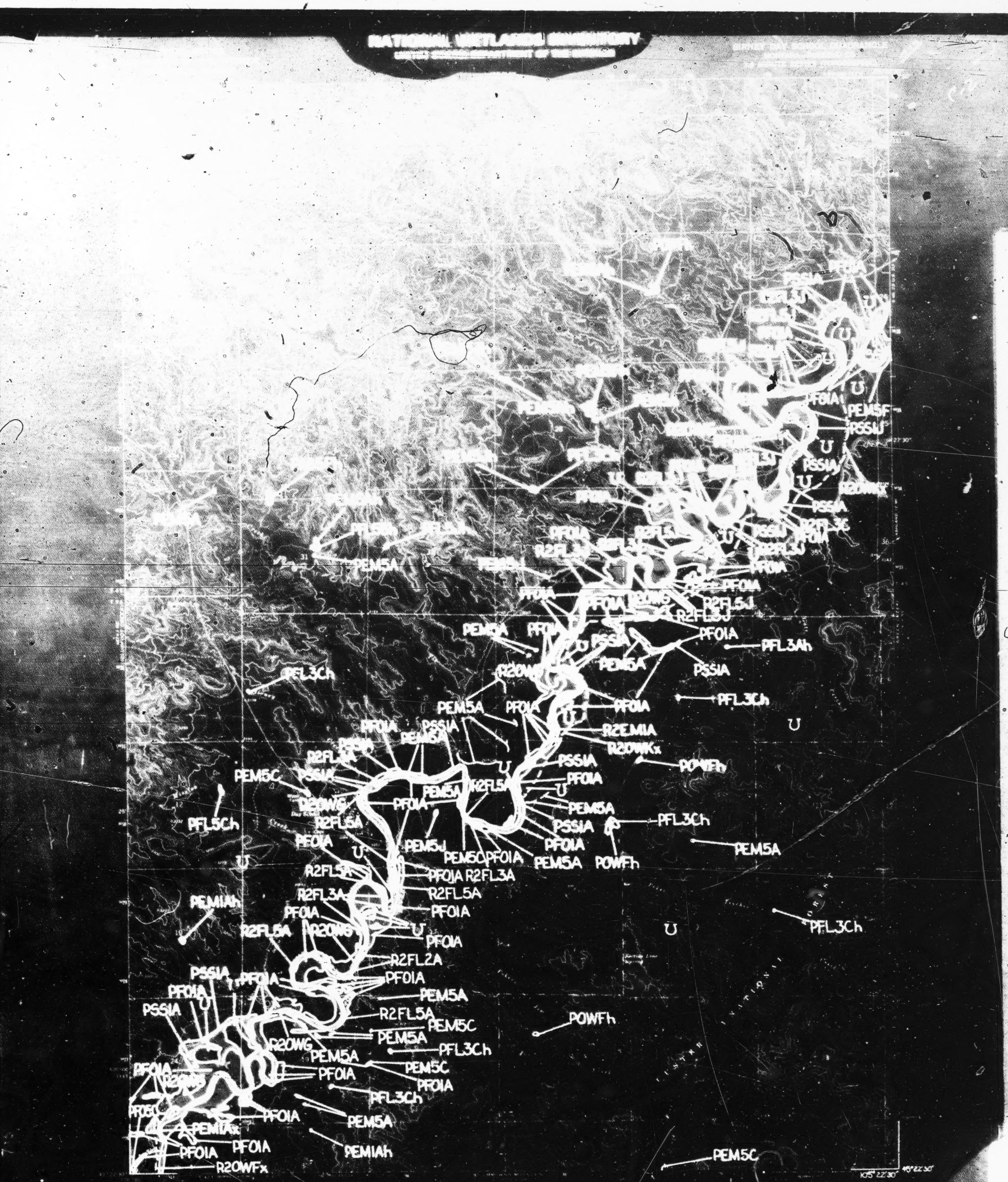
3 7 9 4 2 1

NATIONAL WETLANDS INVENTORY



HARDIN SE.
BIRNEY

BIRNEY DAY SCHOOL MONT

105° 22' 30" 45°22'30"

MICROFICHE INDEX
BIRNEY (HARDIN SE)

NW NE
SW SE

WETLAND LEGEND

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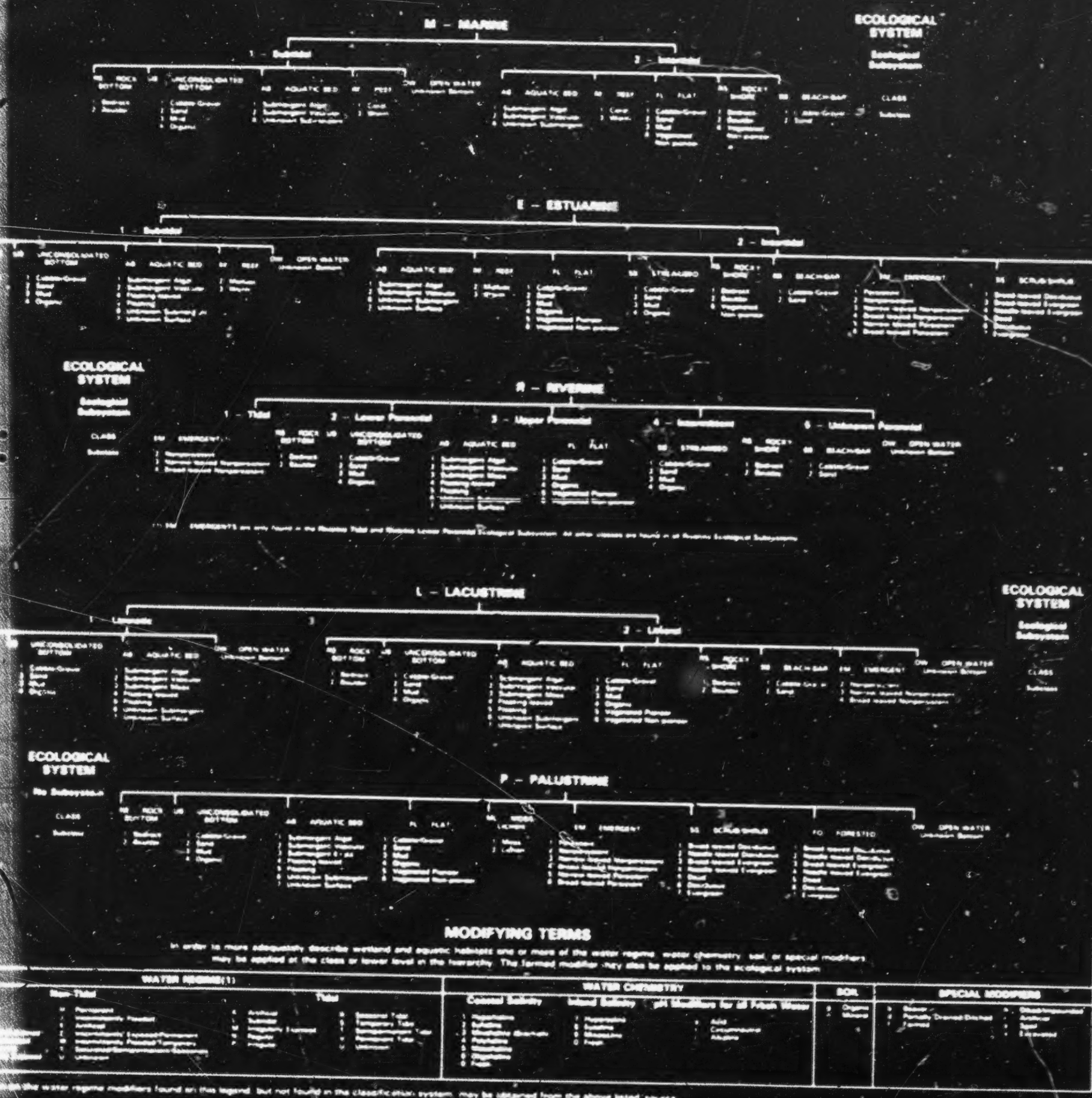

MODIFYING TERMS

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WATER REGIME(1)		WATER CHEMISTRY			SOIL	SPECIAL MODIFIERS
Non-Tidal	Tidal	Coastal Salinity	Inland Salinity	pH Modifiers for all Fresh Water	Organic	Excavated
Permanent	Subtidal	Hypersaline	Hypersaline	Acid	Mineral	Impounded
Intermittently Exposed	Irregularly Flooded	Eusaline	Eusaline	Circumneutral		Diked/Impounded
Semipermanent	Regularly Flooded	Mixosaline	Mixosaline	Alkaline		Spoil
Intermittently Exposed/Permanent	Irregular	Polysaline	Polysaline			Excavated
Seasonal		Mixohaline	Mixohaline			
Intermittently Exposed/Semipermanent		Fresh	Fresh			
Saturated						
Artificial						

(1) Additional water regime modifiers found on this legend, but not found in the classification system, may be obtained from the above listed source.

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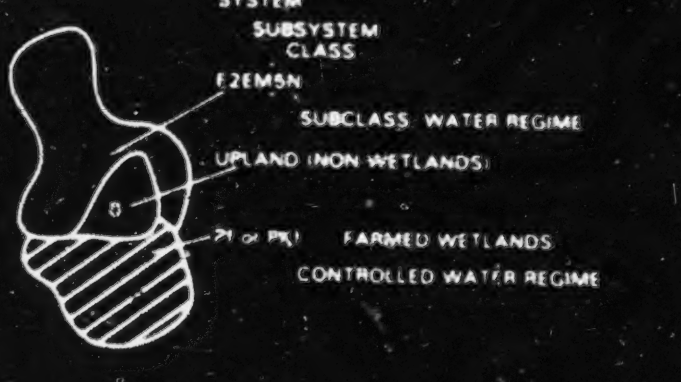

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3 7 9^ 4 2 2

NATIONAL WETLANDS INVENTORY
UNITED STATES DEPARTMENT OF THE INTERIOR

C-2

PEMA
PSSICh
PEMIJ
PFL3Ch
PEM5J
PFL5A
PFL3C
PFL3Cx
PEM5A
POWFh
PEM5C9h
PEM5C
PFL5C9h
PEM1J
PEM1A9h
PFL5A9h
R20WG
PEMIJ
PFO1A
PEMAA
PEMAC
PEM5C/K
PSSIA
PEMIC/K
PSSIC
PFO1A
PEM5C/K
PFO1A
PSSIC
PFO1A

HARDIN SE published by the Geological Survey
BIRNEY

BIRNEY, SW, MONT

MICROFICHE INDEX
BIRNEY (HARDIN SE)

NW	NC	NE
SW	SC	SE

WETLAND LEGEND

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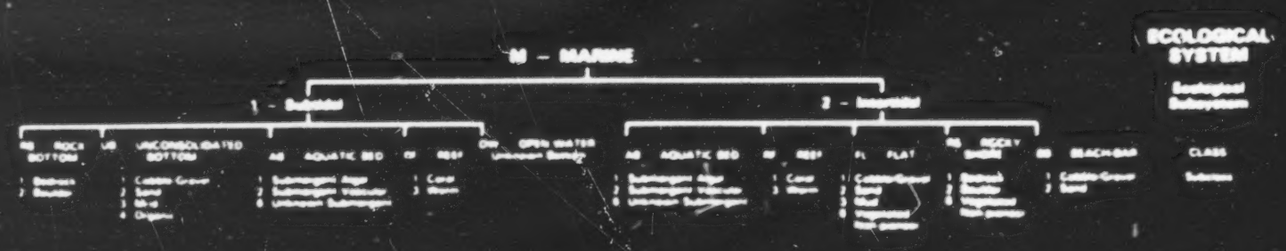

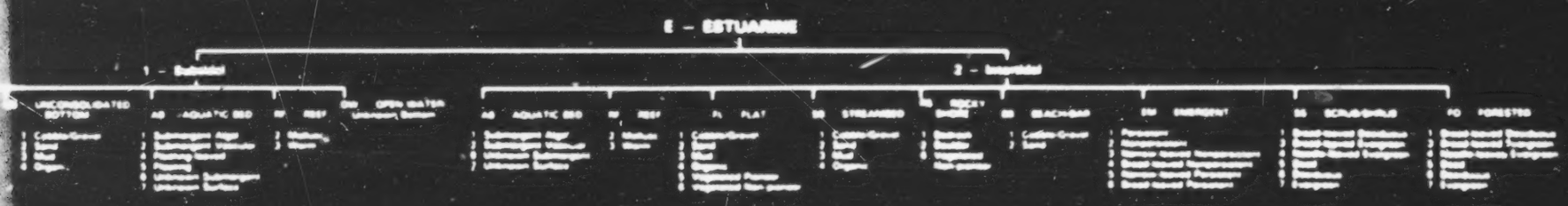

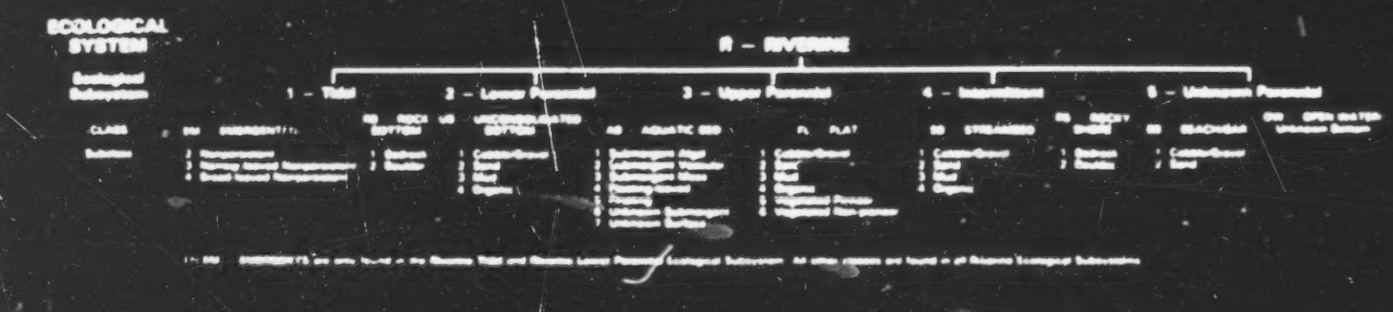

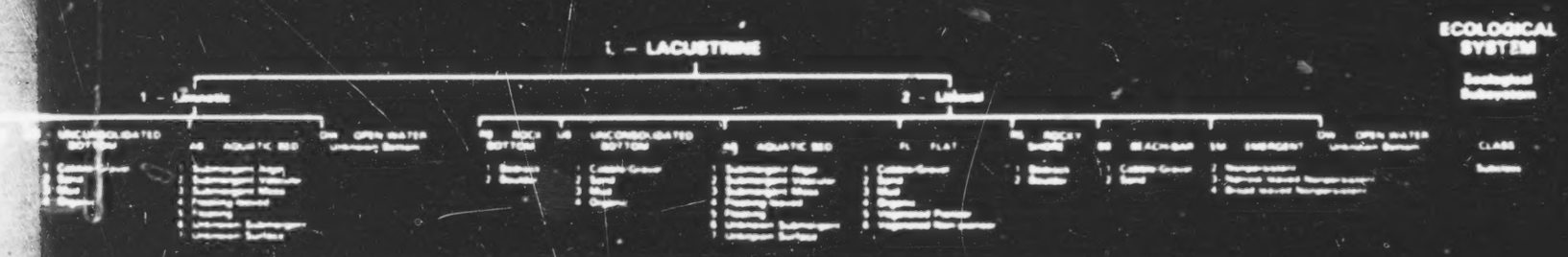

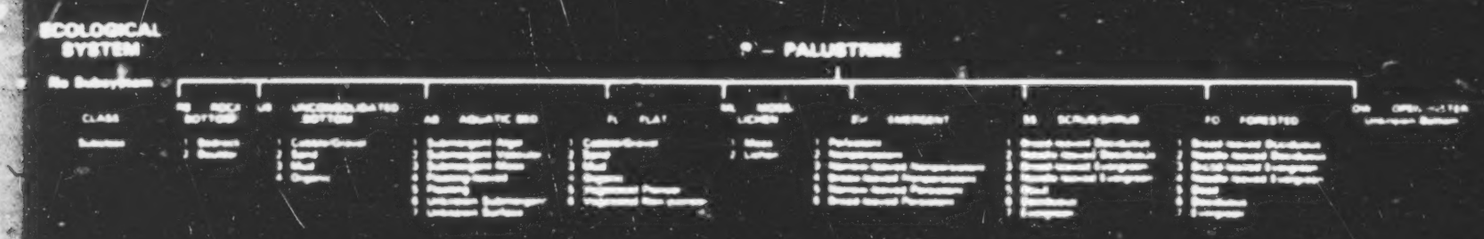

MODIFYING TERMS

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WATER REGIME(1)	WATER CHEMISTRY	SOIL	SPECIAL MODIFIERS
Non-Tidal: Permanent; Intermittently Flooded; Artificial; Intermittently Exposed/Permanent; Semipermanently Flooded/Saturated; Seasonally Flooded/Saturated; Saturated; Artificially Flooded. Tidal: Subtidal; Irregularly Exposed; Regularly Flooded; Irregularly Flooded; Saturated/Semipermanently Flooded; Seasonally Flooded.	Coastal Salinity: Hyperhaline; Euhaline; Mixohaline (Brackish); Polyhaline; Mesohaline; Oligohaline. Inland Salinity: Hypersaline; Eusaline; Mixosaline; Fresh. pH Modifiers for all Fresh Water: Acid; Circumneutral; Alkaline.	Organic; Mineral.	Excavated; Diked/Impounded; Partially Drained/Ditched; Artificial; Spoil; Excavated.

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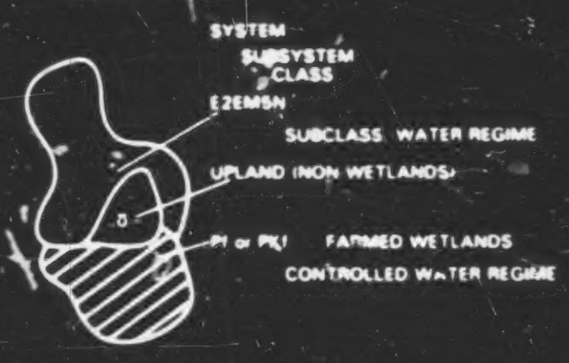
SYMBOLOGY EXAMPLE



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3 7 9 4 2 3

UNITED STATES
DEPARTMENT OF THE INTERIOR

NATIONAL WETLANDS INVENTORY
UNITED STATES DEPARTMENT OF THE INTERIOR

BIRNEY QUADRANGLE
MONTANA—ROSEBUD CO.

C-2

PEMIAh
PEMIAh
PFOIA
PFOIA
PFOIA
PFOIA
PFOIA
PFOIA
R20WG
PSSIA
P28B2C
R28B2C
R20WG
PFL5C
PEMIA/Kx
PFL6A
PEMIJ
PEMIAh
PEMIAh
PFOIJh
PEMIAh
PEMIAh
PEMIA

WETLAND LEGEND

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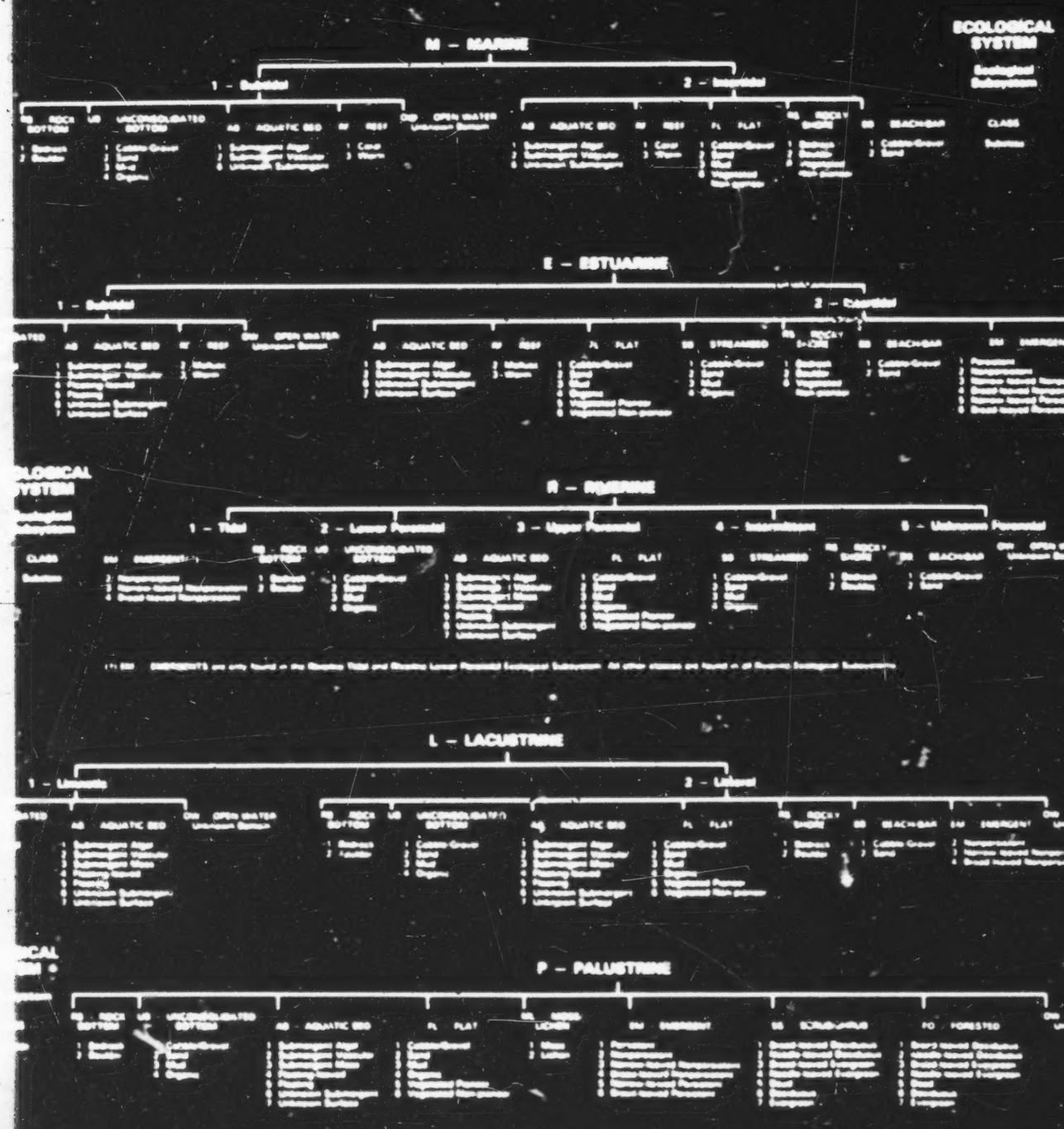

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WATER REGIME(1)	WATER CHEMISTRY	SOIL	SPECIAL MODIFIERS
Tidal	Coastal Salinity	Organic	Excavated
Subtidal	Inland Salinity	Mineral	Diked/Impounded
Irregularly Exposed	pH Modifiers for all Fresh Water		Artificial
Regularly Flooded	Calcareous		Farmed
Irregularly Flooded	Alkaline		
Saturated	Acid		
Artificially Flooded	Hypersaline		
Intermittently Exposed	Eusaline		
Permanently Flooded	Mixosaline		
	Hyposaline		
	Oligohaline		
	Fresh		

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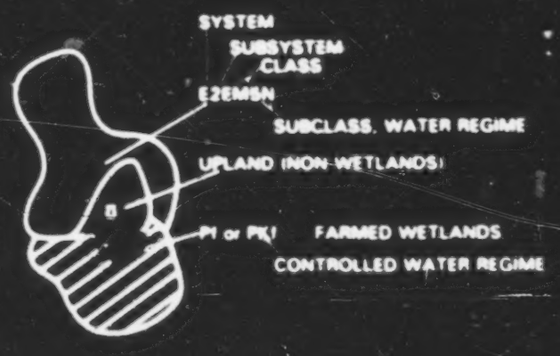

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379424

NATIONAL WETLANDS INVENTORY
UNITED STATES DEPARTMENT OF THE INTERIOR

PFL5Ah
PEMBAh
PEMBC
PEMIC
PEMIG
PEMKBJ
POWKx
PEMIJ
PEMIJ
R2OWF

45°15'
106°30'
2 780 000 FEET
27'30"
SCALE 1:24 000
22'30"

HARDIN SE published by the Geological Survey
BIRNEY
BROWNS MOUTAIN, MONT.
ROAD CLASSIFICATION

MICROFICHE INDEX
BIRNEY (HARDIN SE)

NW	NC	NE
SW	SC	SE

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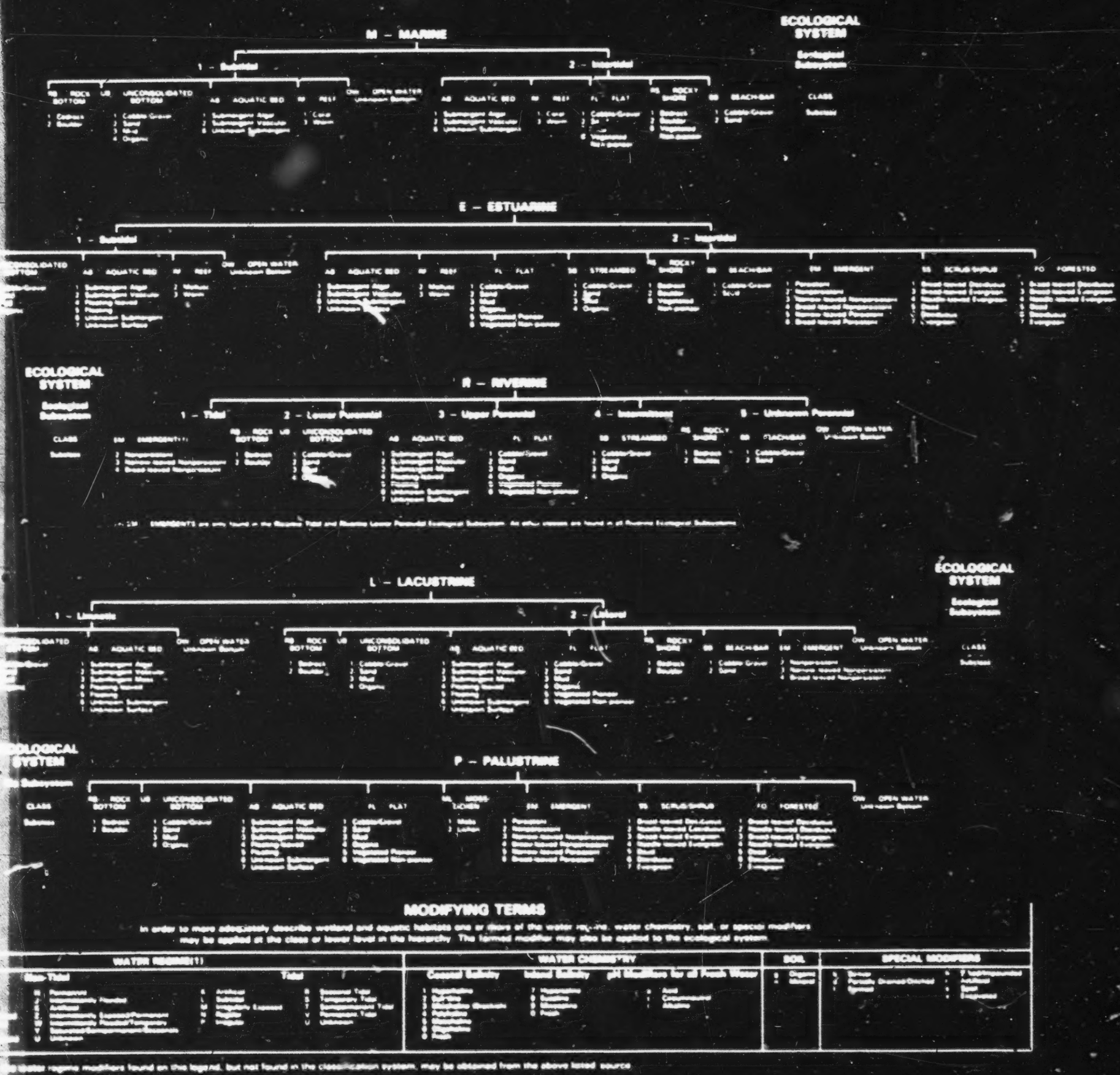

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WATER REGIME(1)								WATER CHEMISTRY			SOIL	SPECIAL MODIFIERS		
Non-Tidal			Tidal					Coastal Salinity	Inland Salinity	pH Modifiers for all Fresh Water				
A	Temporary	E	Saturated	G	Intermittent Tidal	K	Artificial	1 Hyperhaline	5 Hypersaline	8 Acid	1 Organic	1 Diked/Impounded	5 Partially Drained/Ditched	7 Farmed
B	Saturated	F	Seasonal	H	Permanent Tidal			2 Euhaline	6 Eusaline	9 Circumneutral	2 Mineral	2 Artificial	6 Spoil	8 Excavated
C	Seasonal							3 Mixohaline (Brackish)		0 Alkaline				
D	Intermittently Exposed							4 Polyhaline						
E	Permanently Flooded													
F	Intermittently Exposed/Permanent													
G	Intermittently Flooded/Artificial													
H	Unknown													

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379 425

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PEMIA

PFL3Ch

PSSIA

PEMIAh

PFL3Ch

PEMIAh

PEMIAh

PFL3C9h

PFL5Ch

PEM5A

PEM5Cx

PEM5A

PFL3J

PEM5Ah

PEMIAh

SCALE 1:24000

HARDIN SE.
BIRNEY

GREEN CREEK MOUNTAIN

MICROFICHE INDEX
BIRNEY (HARDIN SE)

NW	NC	NE
SW	SC	SE

C-2

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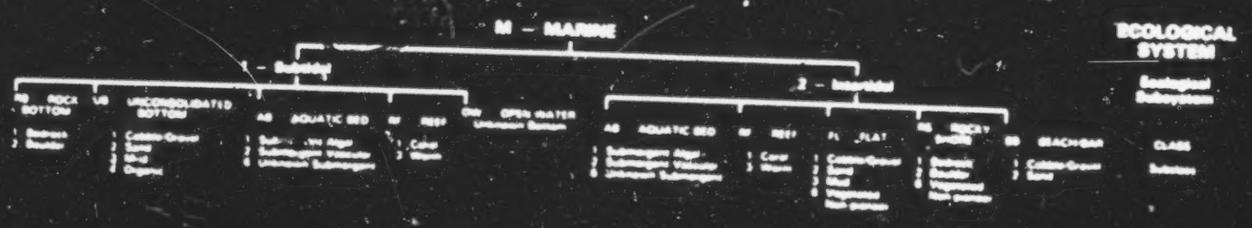

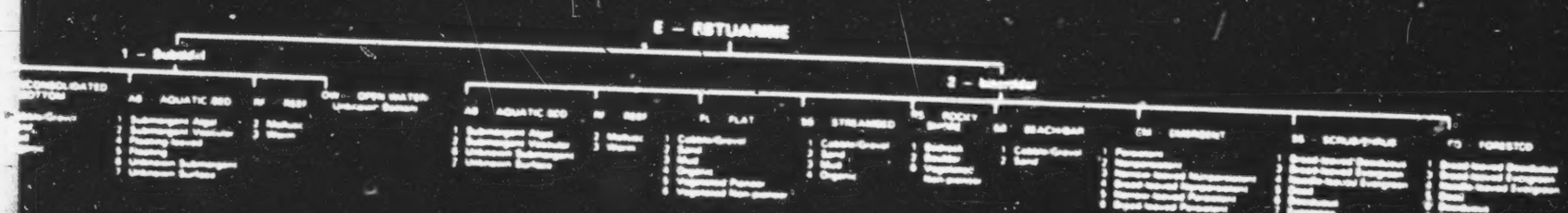

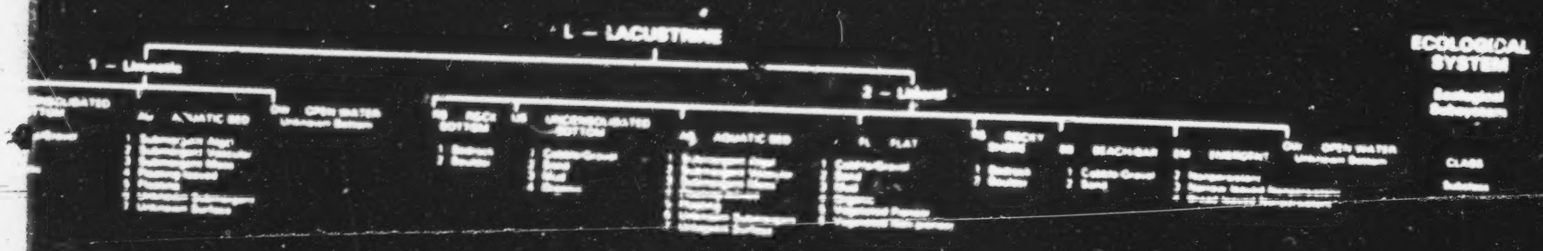

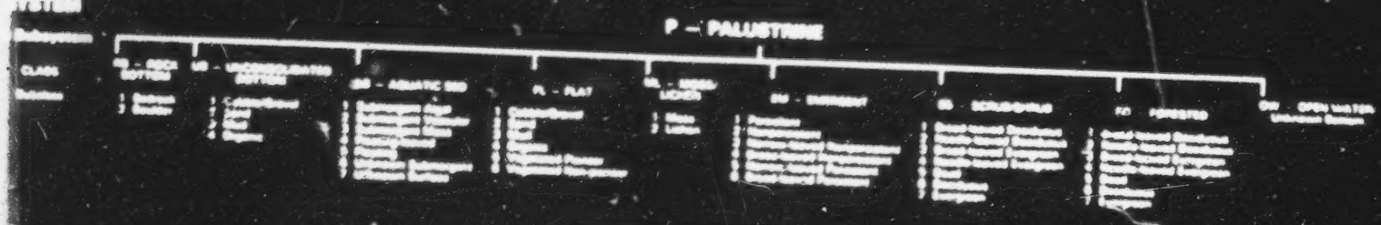

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WATER REGIME(1)	WATER CHEMISTRY	SOIL	SPECIAL MODIFIERS
Tidal	Coastal Salinity / Inland Salinity / pH Modifiers for Inland Fresh Water	1 Organic	Beaver / Partly Drained/Ditched / Diked/Impounded / Farmed / Artificial

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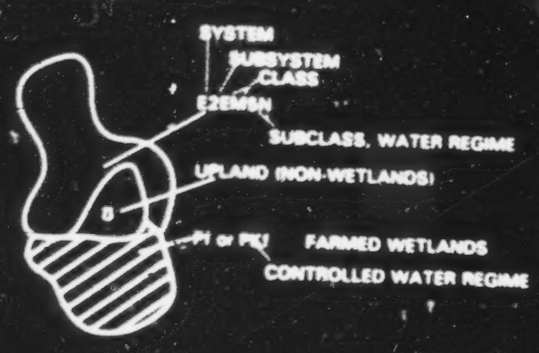

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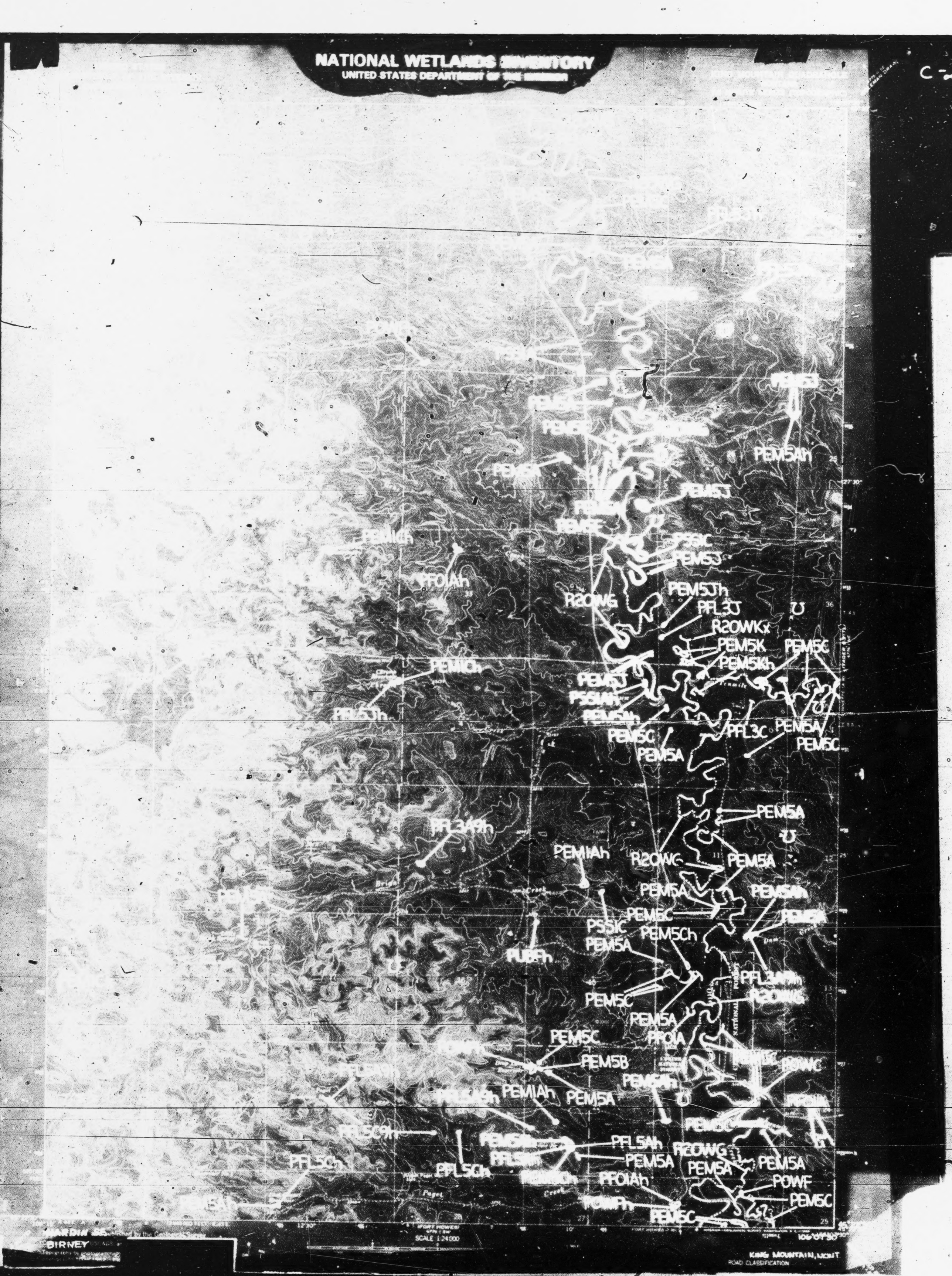
3 7 9 4 3 2

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR



MICROFICHE INDEX

BIRNEY (HARDIN SE)

NW	NC	NE
SW	SC	SE

WETLAND LEGEND

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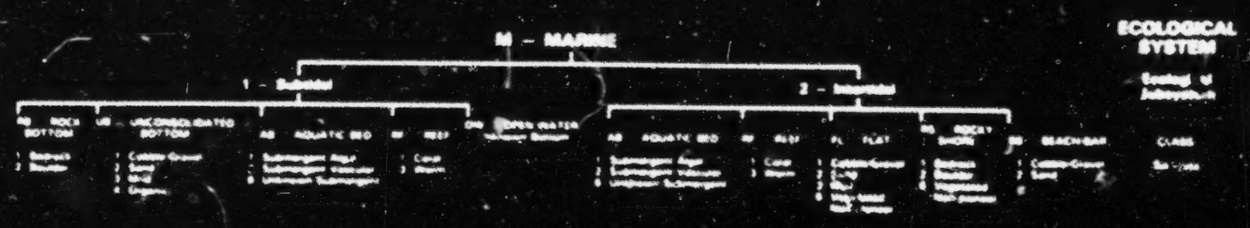

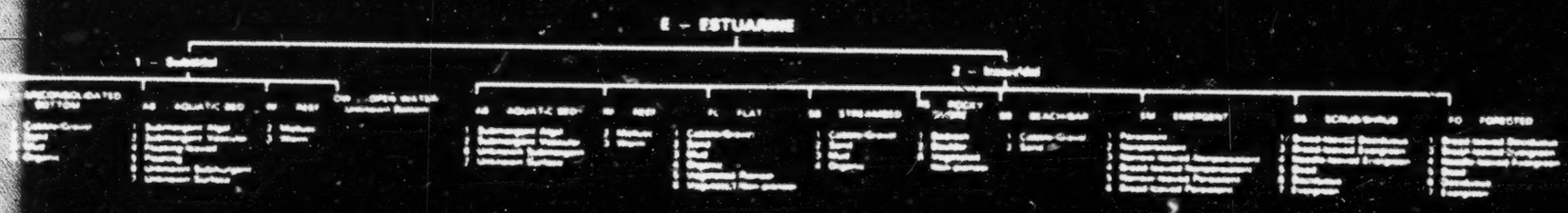

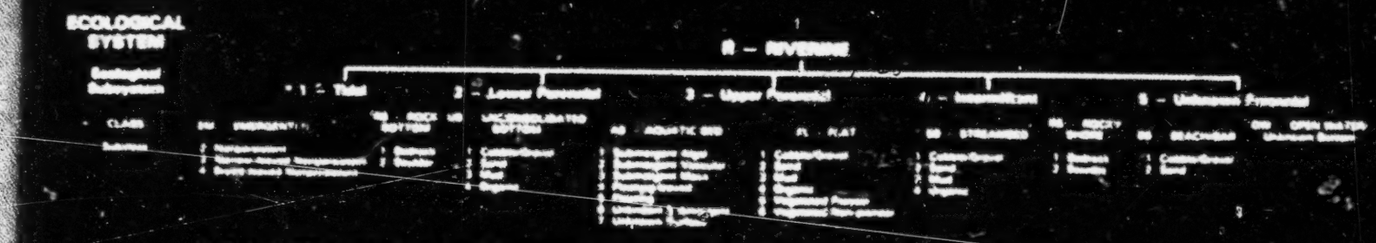

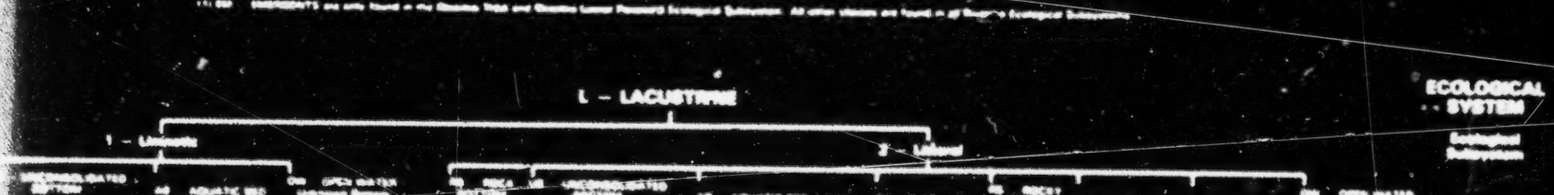

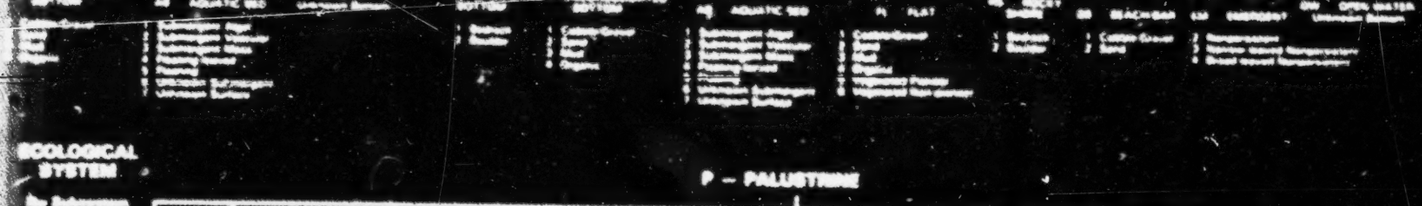

MODIFYING TERMS

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WATER REGIME(1)						WATER CHEMISTRY			SOIL	SPECIAL MODIFIERS		
Non-Tidal		Tidal				Coastal Salinity	Inland Salinity	pH Modifiers for all Fresh Water				
A Temporarily Flooded	F Semipermanently Flooded	G Intermittently Exposed	H Permanently Flooded	J Intermittently Flooded	K Artificially Flooded	5 Hypersaline	6 Euhaline	7 Mixohaline (Brackish)	8 Polyhaline	1 Hyperhaline	2 Euhaline	3 Mixohaline (Brackish)	4 Polyhaline	0 Acid	9 Alkaline	b Beaver	d Partly Drained/Ditched	f Farmed	h Diked/Impounded	r Artificial	s Spoil	x Excavated

(1) Additional water regime modifiers found on this legend, but not found in the classification system, may be obtained from the above listed source.

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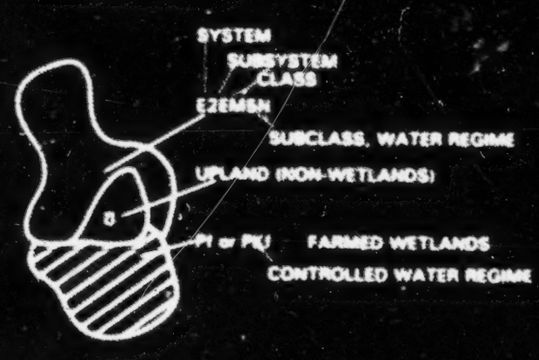
SYMBOLOGY EXAMPLE



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379433

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

C2

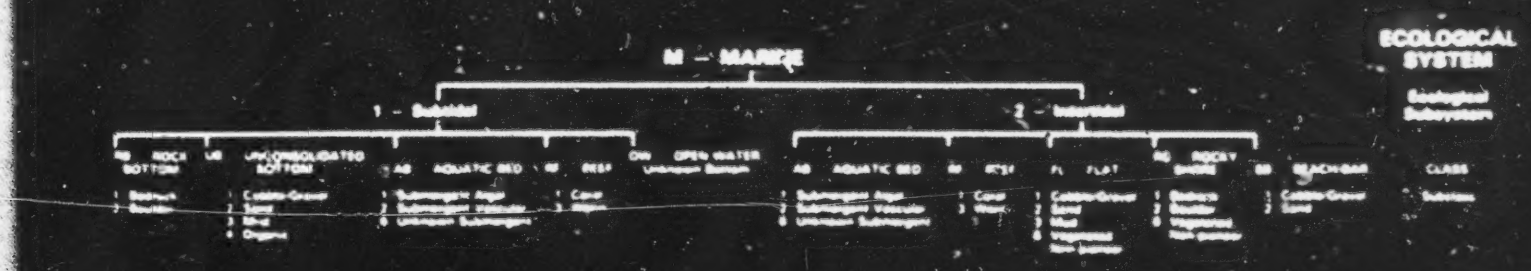
POWFh
PEM5F
PFL5J
PEM5A
PEM5C
PSS1A
PEM5K
PEM5C
PEM5E
PEM5A
PFL5A9h
PEM5A
PEM5C
PSS1Ah
PEM5A
PEM5Ah
PFL5Ah
PEM1Ch
PEM1Fh
PEM5Ch
PFO1A
PEM5C

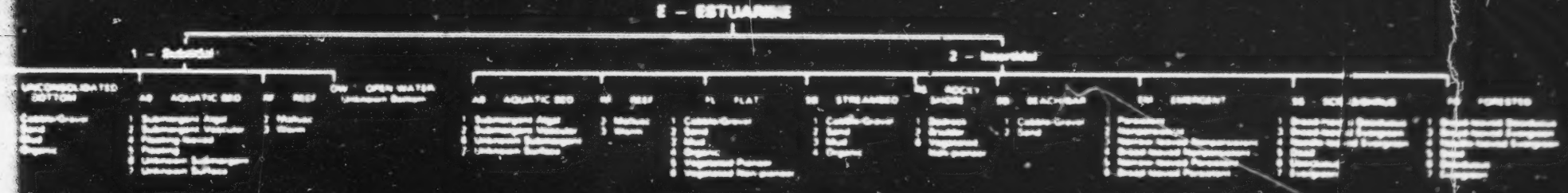
MICROFICHE INDEX
BIRNEY (HARDIN SE)

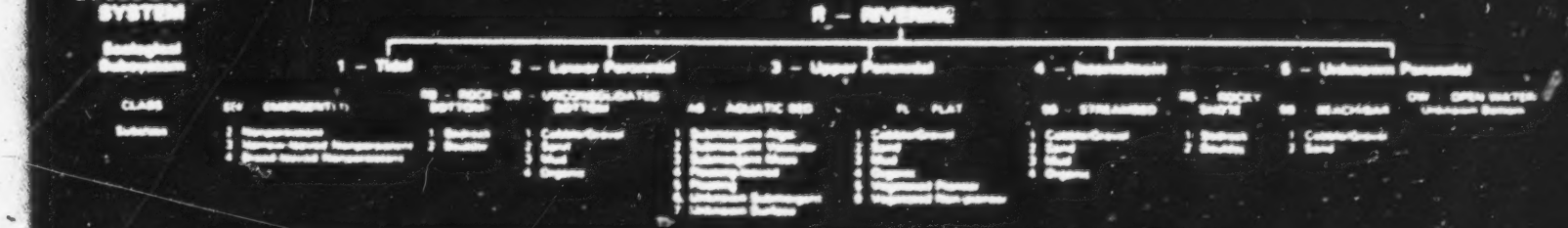
NW	NC	NE
SW	SC	SE

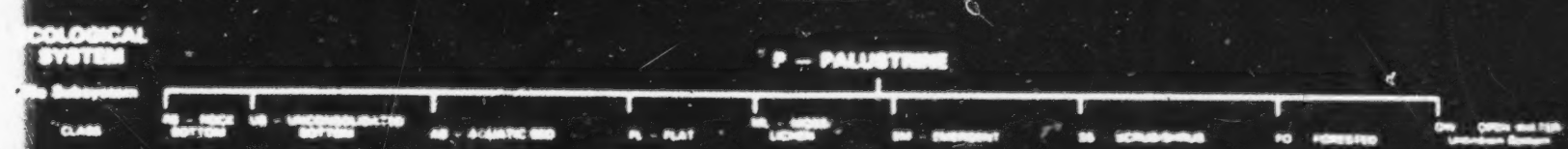
WETLAND LEGEND

U – Primarily represents upland areas, but may include unclassified wetlands such as man-modified areas, non photo-identifiable areas and/or unintentional omissions.









MODIFYING TERMS

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WATER REGIME(1)			WATER CHEMISTRY			SOIL	SPECIAL MODIFIERS
Non-Tidal	Tidal		Coastal Salinity	Inland Salinity	pH Modifiers for all Fresh Water	Organic	Excavated
Permanently Flooded	Subtidal	Temporary Tidal	Hypersaline	Hypersaline	Acid	Mineral	Partially Excavated
Intermittently Exposed	Irregularly Exposed	Seasonal Tidal	Euhaline	Eusaline	Circumneutral		Spoil
Semipermanently Flooded	Regularly Flooded	Lunar Tidal	Mixohaline (Brackish)	Mixosaline	Alkaline		Diked/Impounded
Seasonally Flooded			Polyhaline				
Saturated			Mesohaline				
Artificially Flooded			Oligohaline				
			Fresh				

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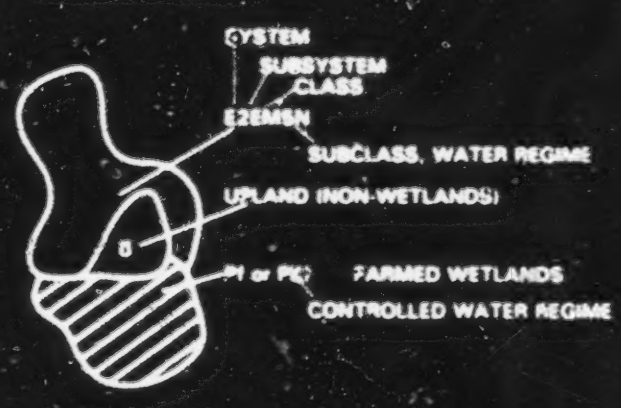

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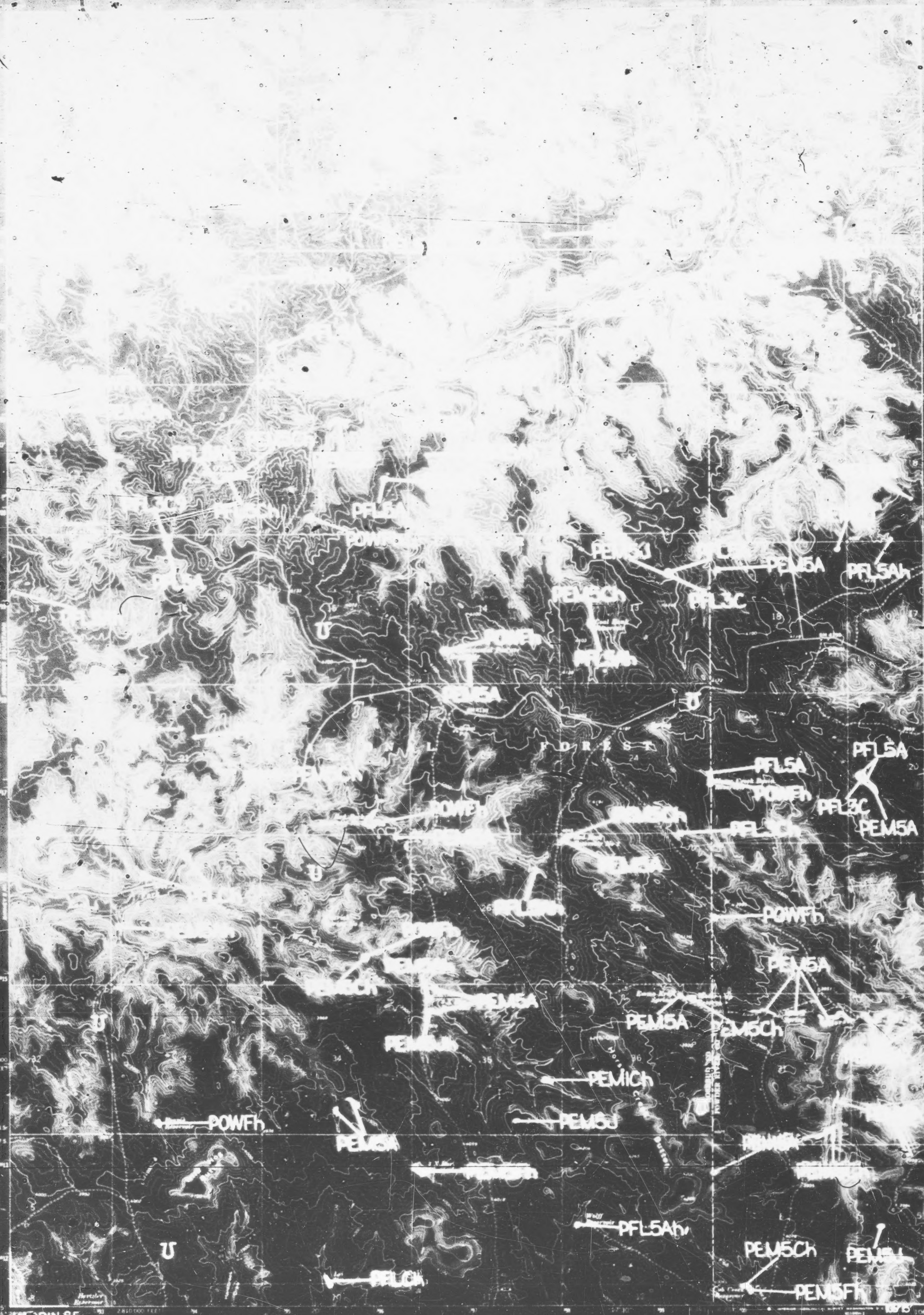
3794344

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

NATIONAL WETLANDS INVENTORY
UNITED STATES DEPARTMENT OF THE INTERIOR

POKER JIM BUTTE QUADRANGLE
MONTANA

C-2



HARDIN SE
BIRNEY

Mapped, edited and published by the Geological Survey

SCALE 1:24000

POKER JIM BUTTE, MONT.

ROAD CLASSIFICATION

MICROFICHE INDEX
BIRNEY (HARDIN SE)

NW	NC	NE
SW	SC	SE

WETLAND LEGEND

0 – Primarily represents upland areas, but may include unclassified wetlands such as man-modified areas, non photo-identifiable areas and/or unintentional omissions.

M – MARINE

E – ESTUARINE

R – RIVERINE

L – LACUSTRINE

P – PALUSTRINE

ECOLOGICAL SYSTEM

MODIFYING TERMS

In order to more adequately describe wetland and riparian habitats one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy. The farmed modifier may also be applied to the ecological system.

WATER REGIME(1)	WATER CHEMISTRY			SOIL	SPECIAL MODIFIERS
	Coastal Salinity	Inland Salinity	pH Modifiers for all Fresh Water		

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SYMBOLOGY EXAMPLE

SYSTEM
SUBSYSTEM
CLASS
EMERGENT
SUBCLASS, WATER REGIME
UPLAND (NON-WETLANDS)
PEM or PEMJ FARMED WETLANDS
CONTROLLED WATER REGIME

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379 435

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

FORT POWER QUADRANGLE

SCALE

7.5 MINUTE SERIES (TOPOGRAPHIC)

PEMA

PEMA

PEMA

WETLAND LEGEND

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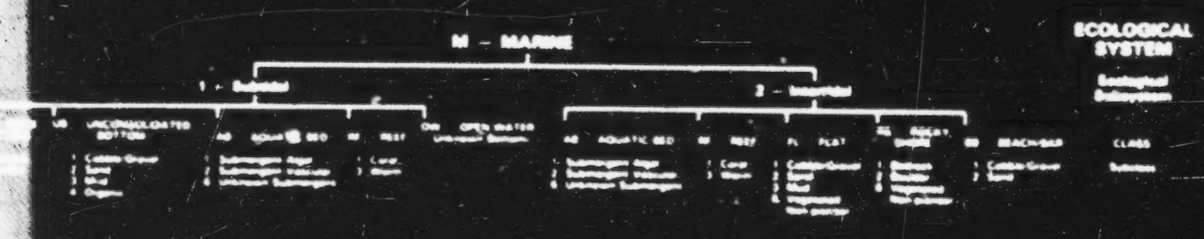

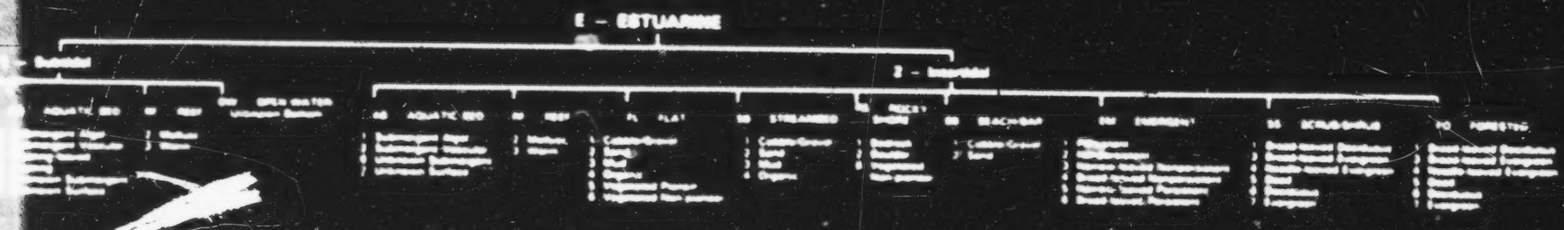

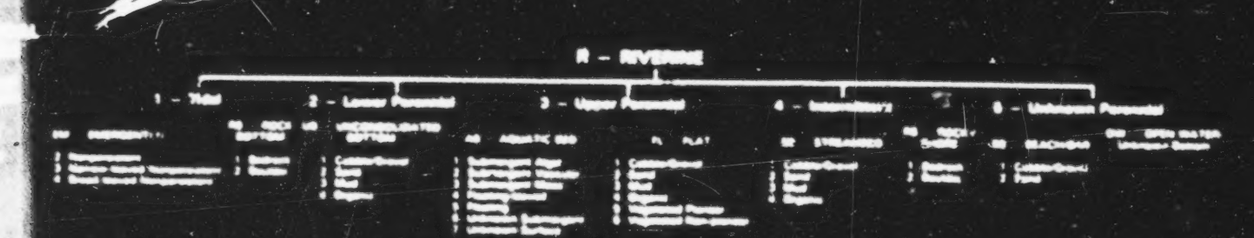

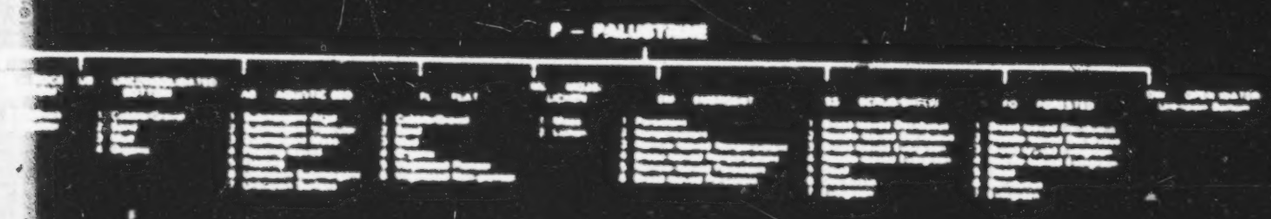

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WATER REGIME (1)	WATER CHEMISTRY	SOIL	SPECIAL MODIFIERS
Tidal Subtidal Irregularly Exposed Regularly Flooded Irregularly Flooded Saturated Semipermanently Flooded Intermittently Flooded Permanently Flooded Intermittently Exposed Artificially Flooded Diked/Impounded Seasonally Flooded Temporarily Flooded Intermittently Flooded Artificial Artificially Flooded Semiartificially Flooded Natural Intermittently Flooded Temporarily Flooded Saturated Seasonally Flooded Semipermanently Flooded Permanently Flooded Intermittently Exposed Permanently Flooded Intermittently Exposed Semipermanently Flooded Seasonally Flooded Saturated Temporarily Flooded Intermittently Flooded Artificially Flooded	Coastal Salinity Hyperhaline Euhaline Mixohaline (Brackish) Inland Salinity Hyperhaline Eusaline Mixosaline pH Modifiers for Use in Fresh Water Acid Circumneutral Alkaline	Organic Mineral	Saturated Partially Drained/Ditched Farmed Diked Excavated

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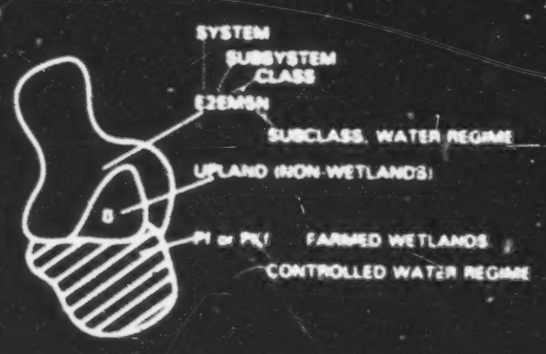

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3 7 9 4 3 6

C-2

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PEMA
PEMA
PEM5A
PPL3Ch
PEM5K
PEM5A
PEM5A
PPL5A
PEM5A
PEM5A
PFL5Ah
PEM5J
PFL5Ch
PFL5A
PEM5A
PEM5J
PFL5A
PEM5J
PEM5A
PEM5A
PEM5J
PEM5C
PEM5F
PSS1Ah
PEM5Fh
PEM5C
PEM5J
PEM5J
PFL3A
PEM5J
PEM5J
PFL3A
PEM5A
PEM5A
PEM5A
PEM5J
PEM5C
PEM5A
PEM5A
PEM5A

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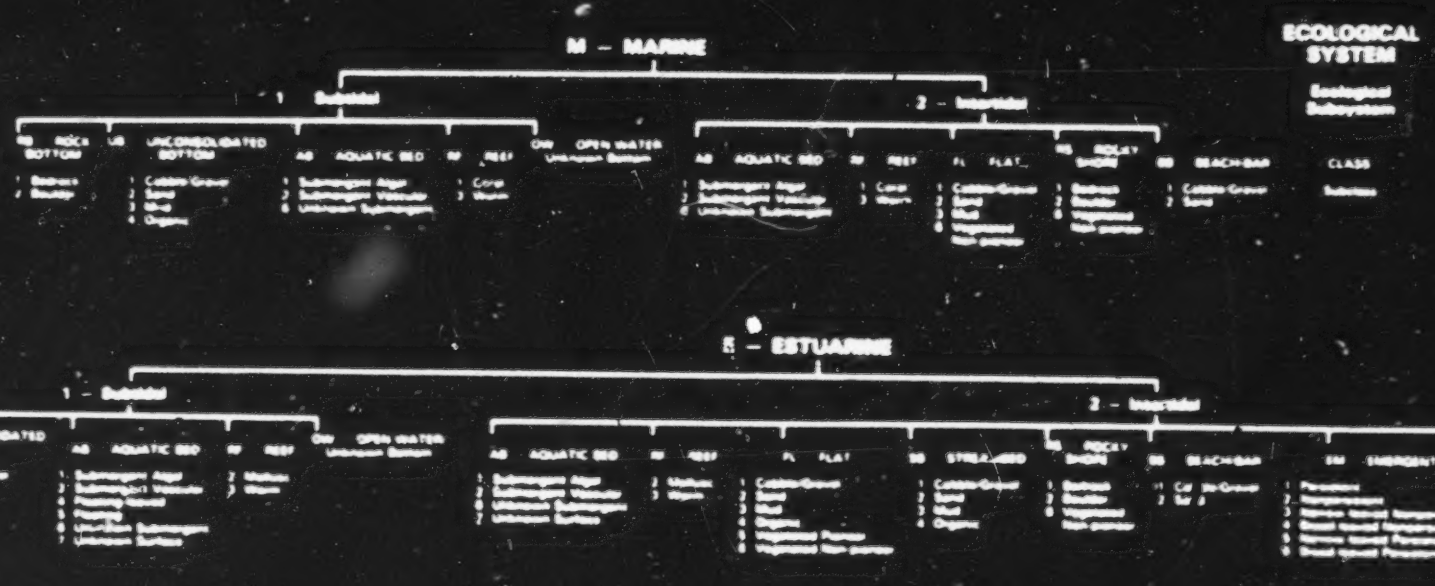

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WATER REGIME(1)	WATER CHEMISTRY			SOIL	SPECIAL MODIFIERS
	Coastal Salinity	Inland Salinity	pH Modifiers for all Fresh Water		

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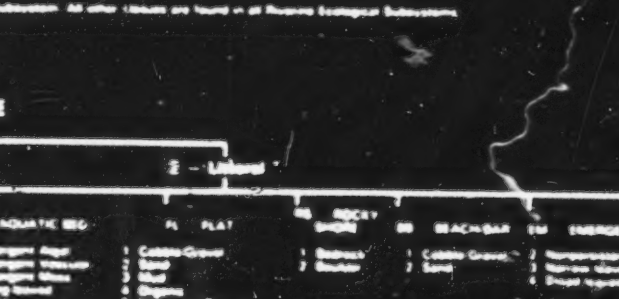

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3794371

NATIONAL WETLANDS INVENTORY
UNITED STATES DEPARTMENT OF THE INTERIOR

-2

PFL3Ch
PEMIFC
PEMIFCT
PFL3A
U
PFL5Ch
South
Fork
Tear
PEMIA
PEMIFC
PFL3Ch
Rock
PEMIFCJ
PFL5Ch
PEMIAh
PFL3Ah
North
Fork
Creek
PEMIJ
PEMIFCA
Monument
PFL3Ch
PEM5Ch
PEM5C
PEMIAh
PEM5J
PEMIJh
PFL5Ah
PFL3Ah
PEM5J
PEM5Ah
PEM5Ah
U
PAB7Fh
PEMIAh
PEM5J
PFL3Ah
PFL5Ch
PFL5Ah
PEMIAh
PEMIAh
Spring
Creek
Monument Creek
TONGUE RIVER DAM
HARDIN SE
BIRNEY
PEARL SCHOOL
HALE MOON HILL MONT

MICROFICHE INDEX
BIRNEY (HARDIN SE)

NW	NC	NE
SW	SC	SE

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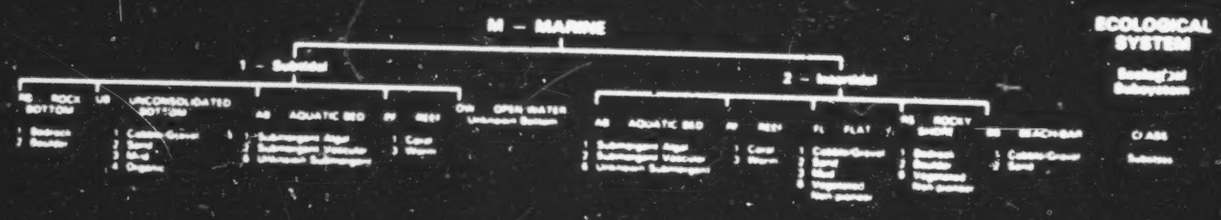
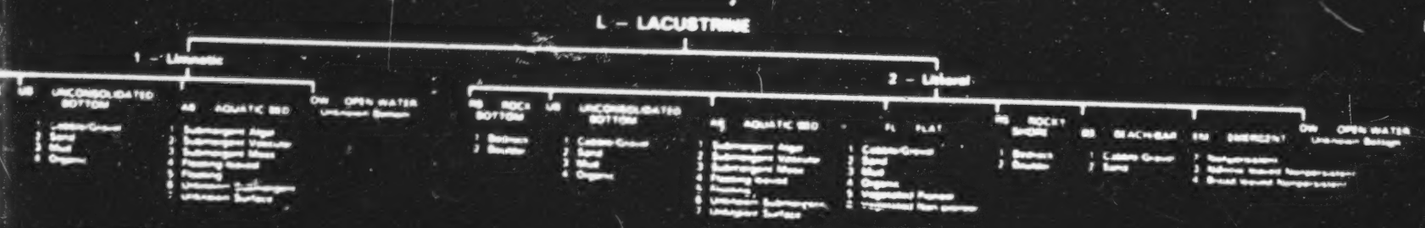
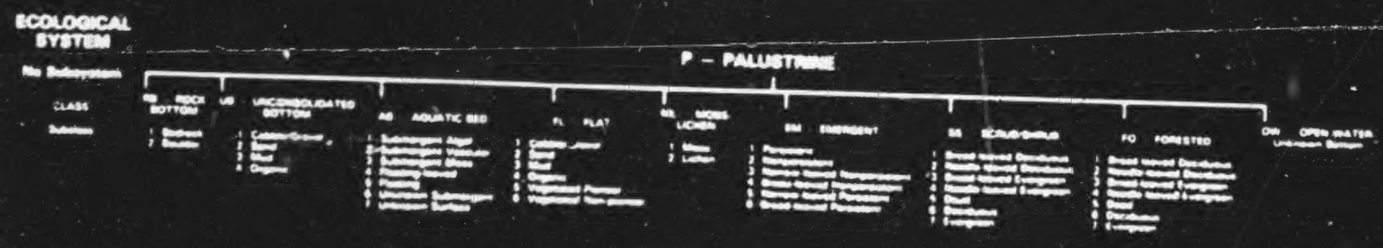


1/ EM EMERGENTS are only found in the Riverine Tidal and Riverine Lower Perennial Ecological Subsystem. All other classes are found in all Riverine Ecological Subsystems.





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WATER REGIME[1]			WATER CHEMISTRY			SOIL	SPECIAL MODIFIERS	
Non-Tidal	Tidal		Coastal Salinity	Inland Salinity	pH Modifiers for all Fresh Water			
N Permanent A Intermittent E Artificially Flooded H Permanently Flooded G Intermittently Exposed/Permanent J Intermittently Flooded/Temporary K Artificially Flooded/Intermittently Exposed/Permanent U Unknown	L Subtidal M Irregularly Exposed R Regularly Flooded	S Seasonal Tidal T Temporary Tidal C Permanent Tidal V Unknown	5 Hypersaline 6 Eusaline 7 Mixohaline (Brackish) 8 Polysaline 9 Fresh	1 Hyperhaline 2 Eusaline 3 Mixosaline 4 Fresh	1 Acid 2 Circumneutral 3 Alkaline	1 Organic 2 Mineral	1 Beaver 2 Partially Drained/Ditched 3 Farmed	4 Diked/Impounded 5 Artificial 6 Spoil 7 Excavated

[1] Based on the water regime modifiers found on this legend, but not found in the classification system, may be obtained from the above listed source.

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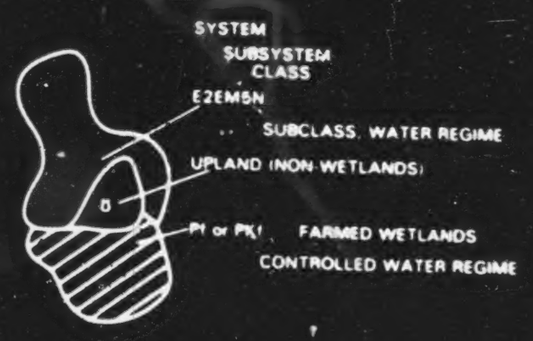
SYMBOLOGY EXAMPLE



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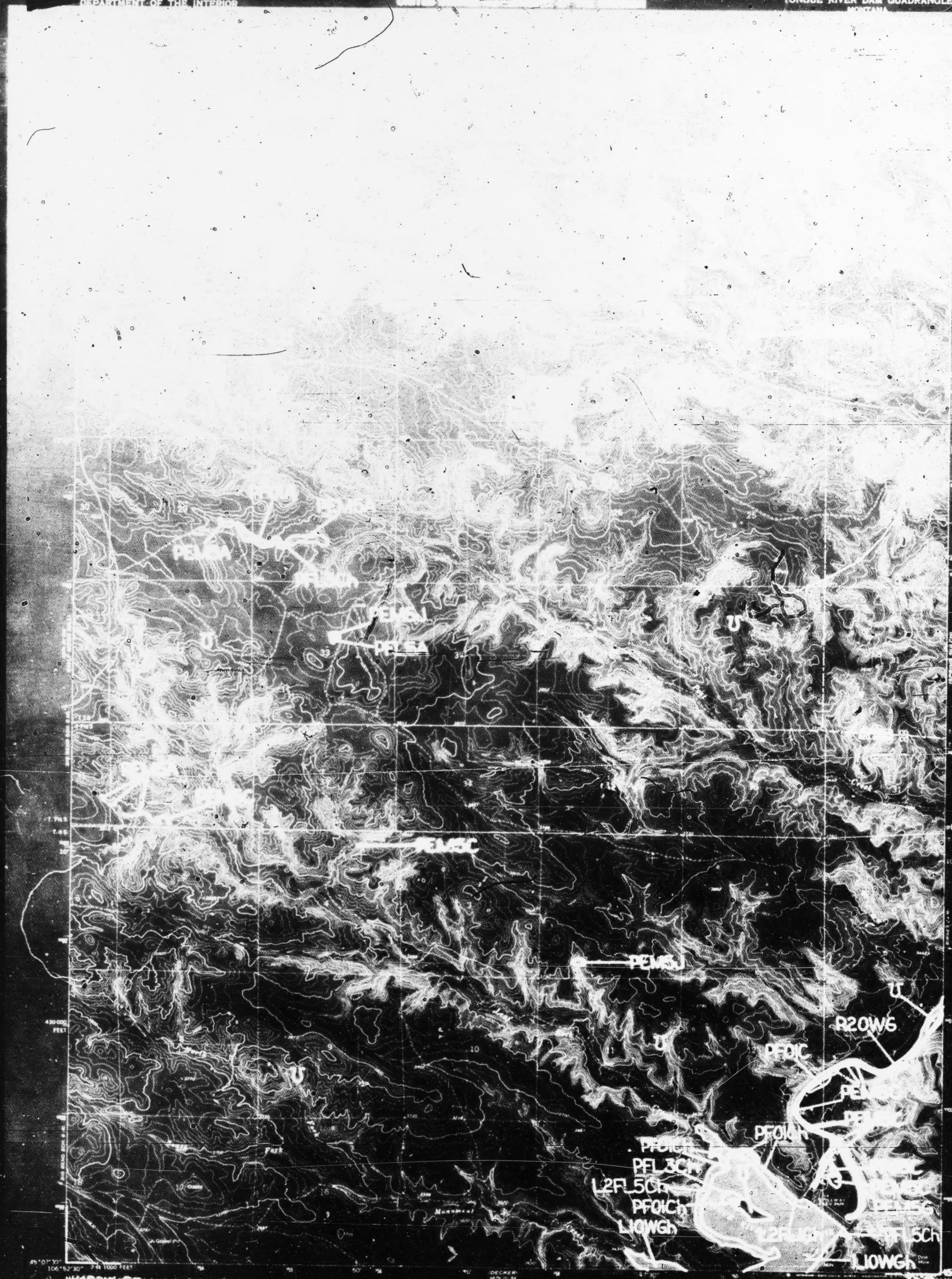
379 416

UNITED STATES
DEPARTMENT OF THE INTERIOR

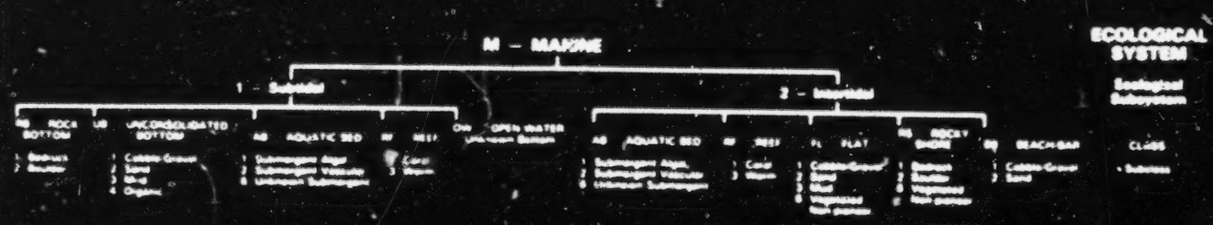
TONGUE RIVER DAM QUADRANGLE
MONTANA

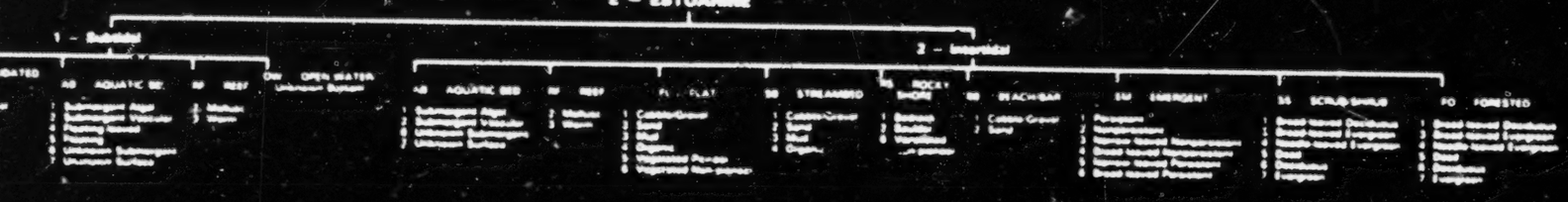

PEMA
PEMA
PEMA

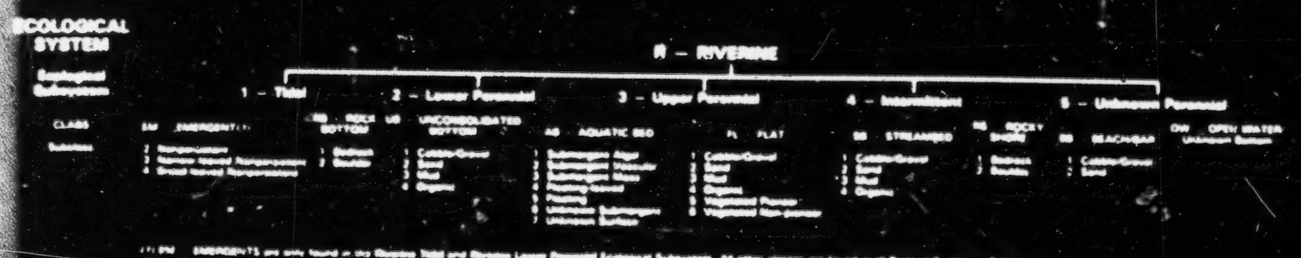
C-2

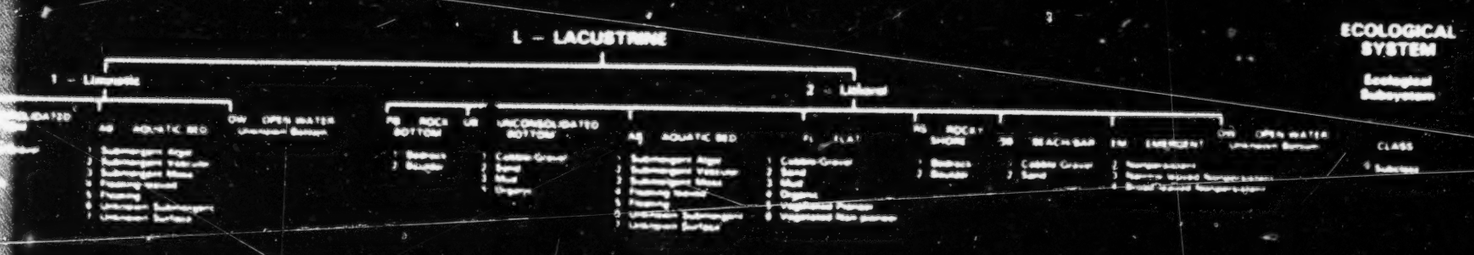
WETLAND LEGEND

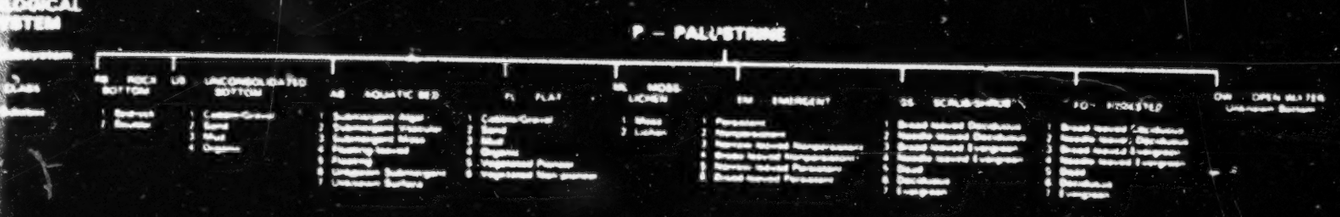
U – Primarily represents upland areas, but may include unclassified wetlands such as man-modified areas, non photo-identifiable areas and/or unintentional omissions.











MODIFYING TERMS

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WATER REGIME(1)	WATER CHEMISTRY	SOIL	SPECIAL MODIFIERS
Non-Tidal: Permanently Flooded; Intermittently Exposed; Semipermanently Flooded; Seasonally Flooded; Saturated; Artificially Flooded; Intermittently Exposed; Permanently Flooded; Intermittently Flooded; Tidal: Subtidal; Irregularly Exposed; Regularly Flooded; Irregularly Flooded; Saltwater Tidal; Freshwater Tidal; Intermediate Tidal; Permanent Tidal; Unknown	Coastal Salinity: Hypersaline; Euhaline; Mixohaline (Brackish); Polyhaline; Mesohaline; Oligohaline; Fresh; Inland Salinity: Hypersaline; Eusaline; Subsaline; Fresh; pH Modifiers for all Fresh Water: Acid; Circumneutral; Alkaline	Organic; Mineral	Beaver; Partly Drained/Ditched; Farmed; Diked/Impounded; Artificial; Spoil; Excavated

(1) Water regime modifiers found on this legend, but not found in the classification system, may be obtained from the above listed source.

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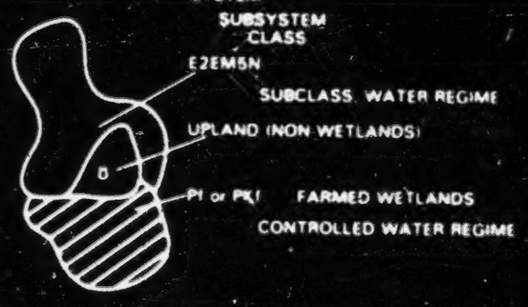

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379.417

NATIONAL WETLANDS INVENTORY
UNITED STATES DEPARTMENT OF THE INTERIOR

PFL3A
PEMIAh
PEMIJ
PFL3Ah
PEM5Ah
PEMIJh
PEM5AJ
PEM5Ah
PFL3A
PFL3Ah
PEM5E
PEM5C
PEM5A
PEMIAh
PEM5E
PFOIA
PEM5Ah
R2OWG
PEMIAh
PS6IJ
PEM5E
PEM5Ah
PFOIA
PEM5E
PEM5C
PEM5A
PEMIAh
PEM5E
PFOIA
PEM5Ah
R2OWG
PEMIAh
PEMIAh
PEMIAh
PFL3Ah
PEM5E
R2OWG
PEM5A
PEMIAh
PFL2Ah
PEM5Ah

HARDIN SE
BIRNEY

PEARL SCHOOL, MONT.

MICROFICHE INDEX
BIRNEY (HARDIN SE)

NW	NC	NE
SW	SC	SE

WETLAND LEGEND

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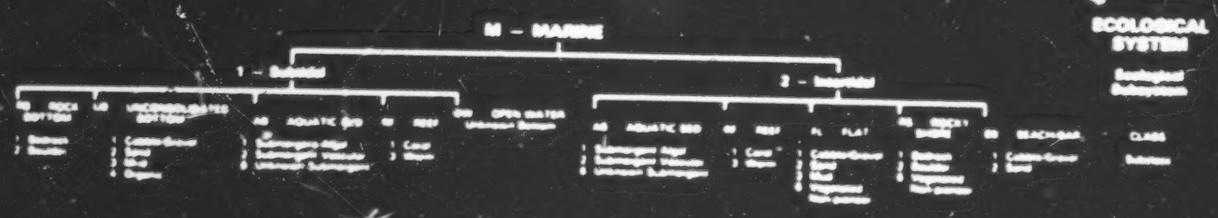

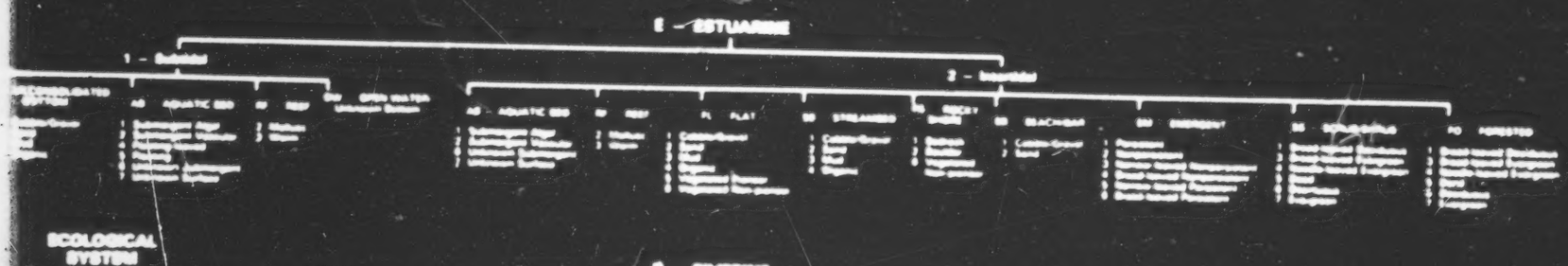

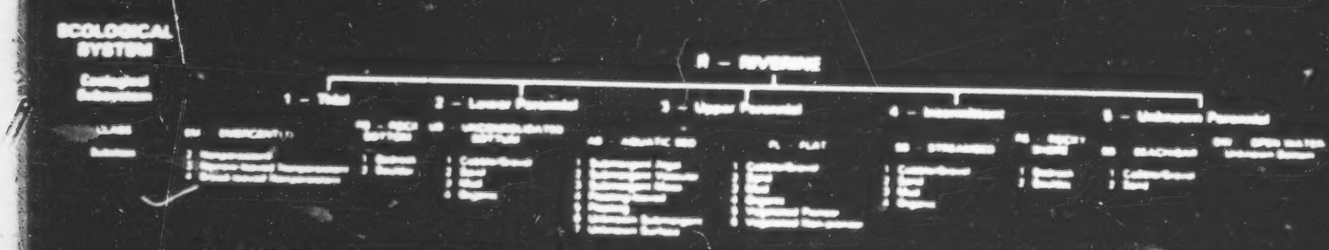

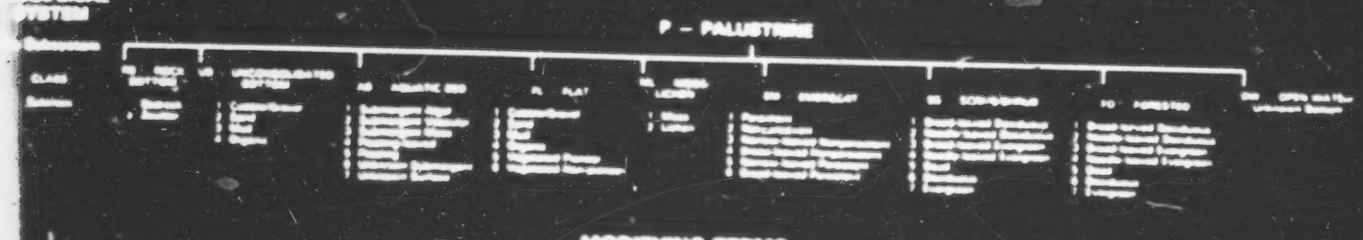

MODIFYING TERMS

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WATER REGIME(1)				WATER CHEMISTRY			SOIL	SPECIAL MODIFIERS	
Non-Tidal		Tidal		Classes (cont'd)	Coastal Salinity	Inland Salinity (all Modifiers in Parts per Thousand)			
Permanent	Saturated	Permanently Flooded	Intermittently Exposed	Hyperhaline	Euhaline	Mixohaline (Brackish)	Organic	Excavated	Partly Drained/Ditched
Permanent Flooded	Artificial	Regularly Flooded	Permanent	Eutrophic	Mesotrophic	Oligotrophic	Mineral	Diked/Impounded	Farmed
Intermittently Exposed/Permanent	Seasonal	Irregularly Flooded	Artificial	Dystrophic					
Semipermanent	Temporary								
Intermittently Flooded									
Artificial									

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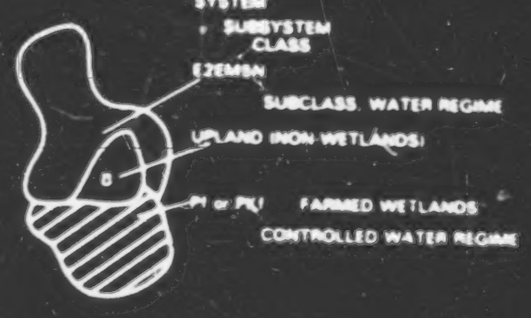

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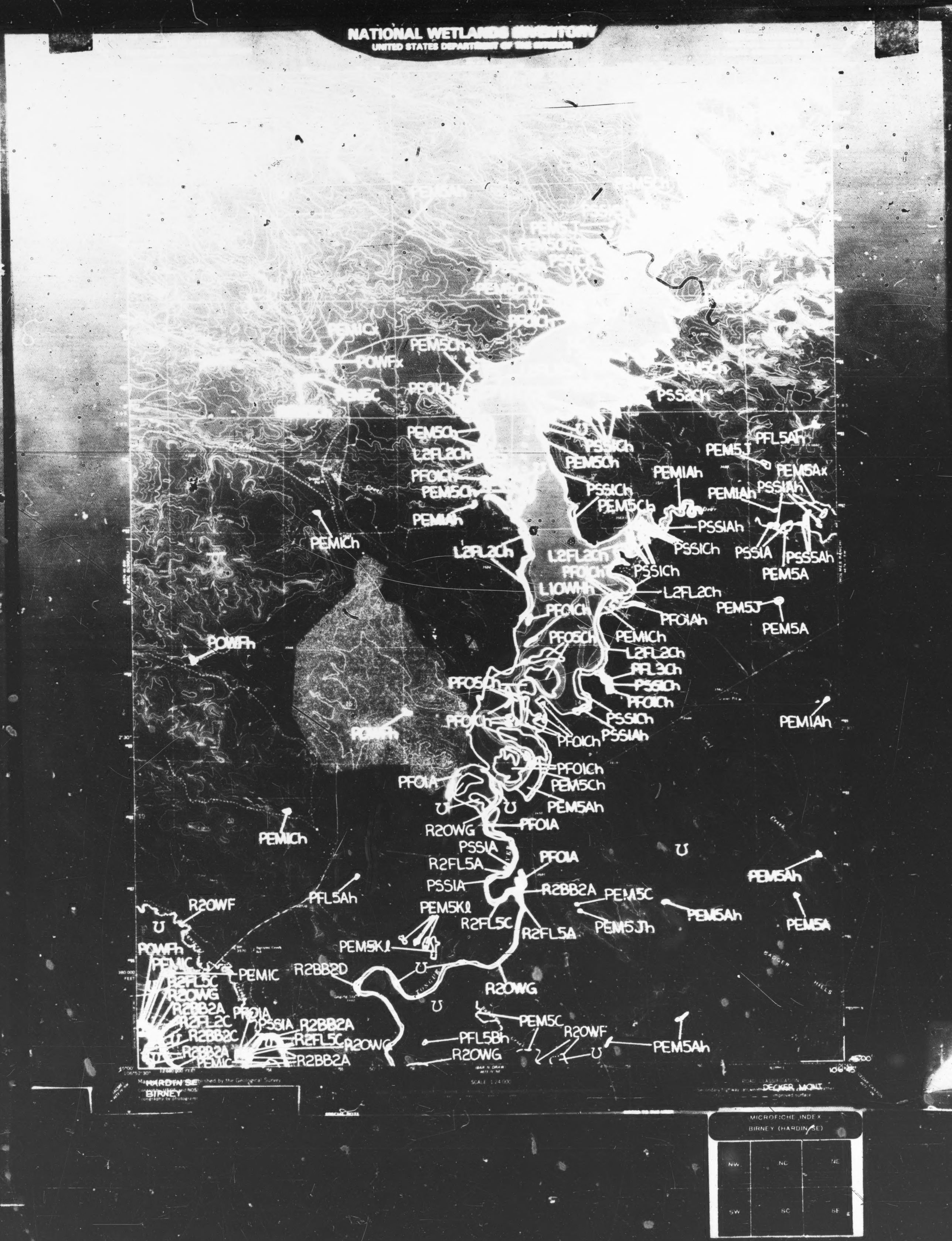
3 7 9 4 1 8

NATIONAL WETLANDS INVENTORY
UNITED STATES DEPARTMENT OF THE INTERIOR



MICROFICHE INDEX
BIRNEY (HARDIN SE)

NW	NC	NE
SW	SC	SE

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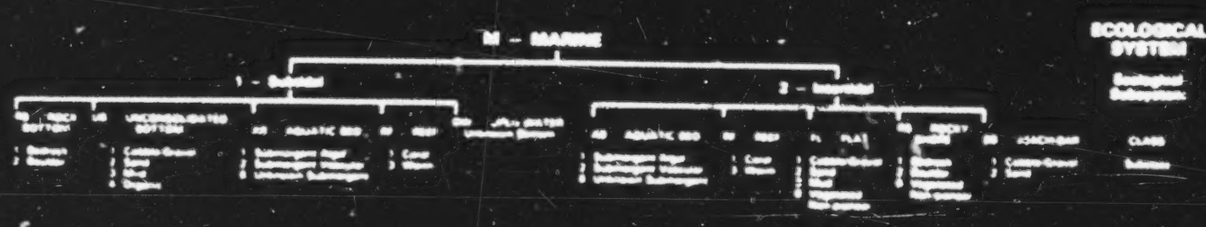
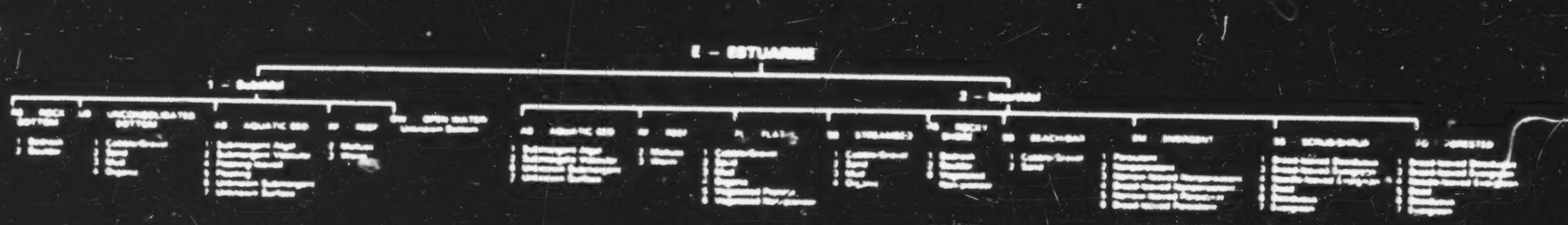
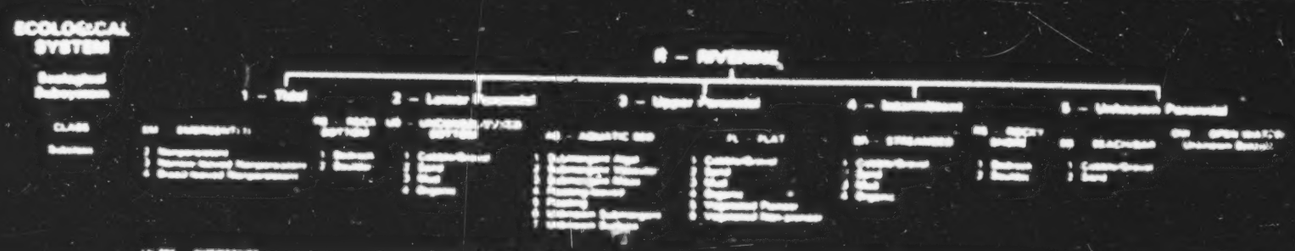
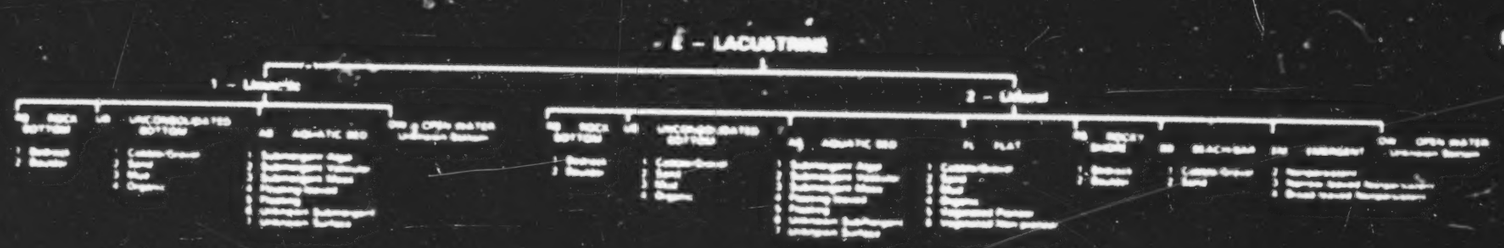
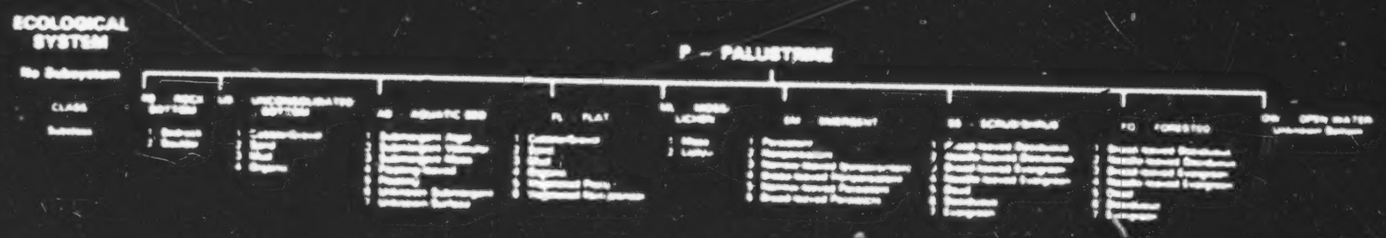






(1) Class – HERBACEOUS are only found in the Riverine Tidal and Riverine Lower Perennial Ecological Subsystem. All other classes are found in all Riverine Ecological Subsystems.





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Non-Tidal		Tidal		Coastal Salinity	Inland Salinity	Modifiers for all Fresh Water			
Permanent	Intermittently Exposed	Permanent	Irregularly Exposed	Hyperhaline	Hyperhaline	Acid	Organic	Diked/Impounded	Partially Drained/Ditched
Semipermanent	Artificial	Regularly Flooded	Artificially Flooded	Euhaline	Euhaline	Circumneutral	Mineral	Artificial	Farmed
Intermittent		Irregularly Flooded		Mixohaline (Brackish)	Mixohaline (Brackish)	Alkaline		Spoil	
Temporary								Excavated	

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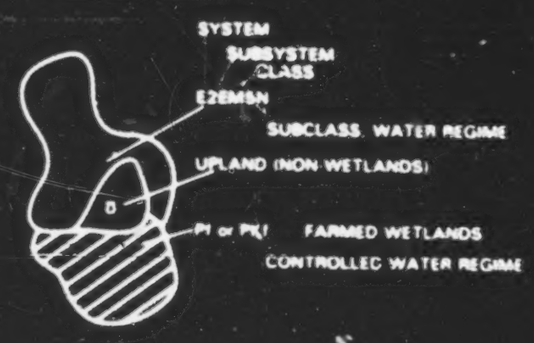

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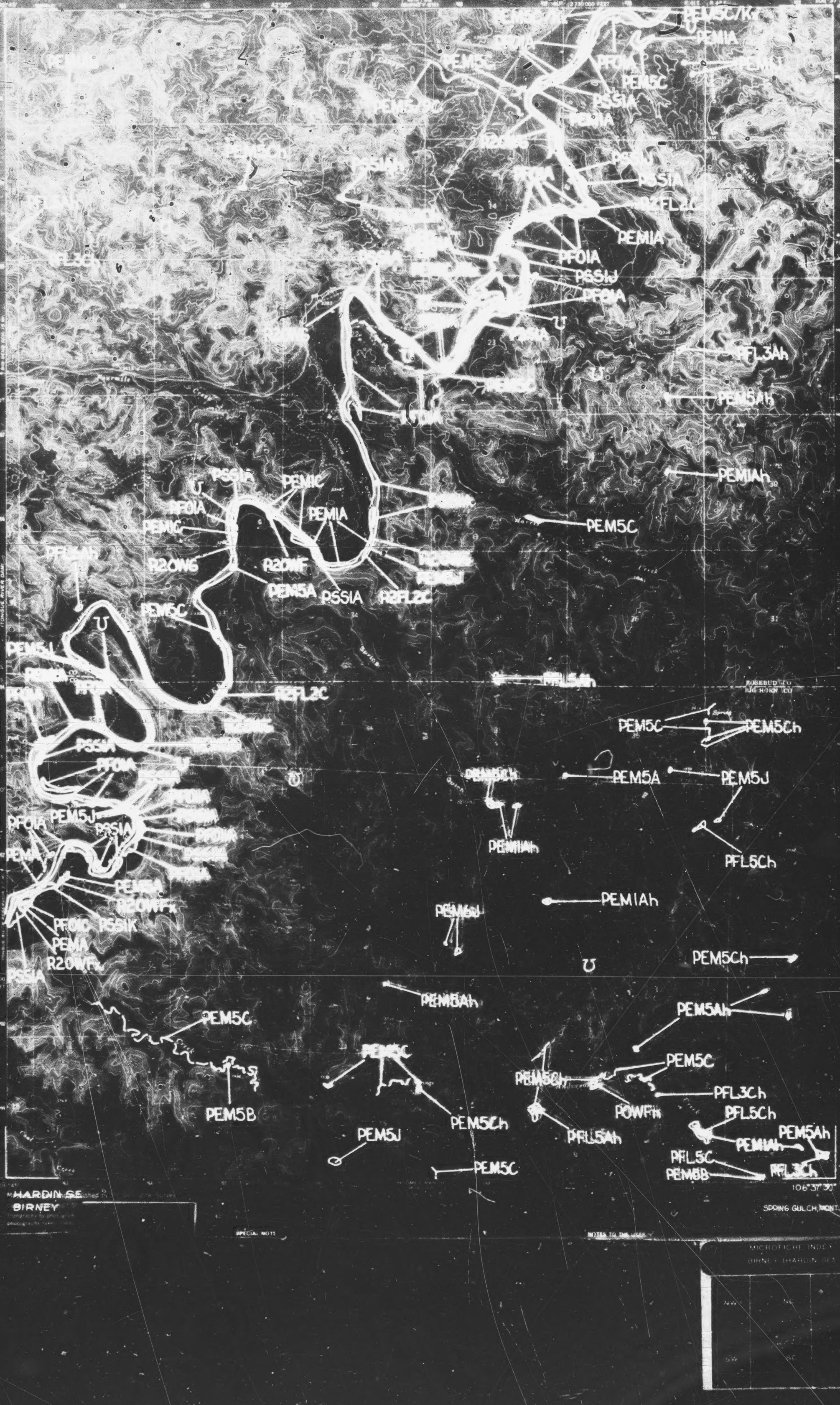
3 7 9 4 1 9

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SPRING GULCH QUADRANGLE
MONTANA
7.5 MINUTE SERIES (TOPOGRAPHIC)



HARDIN SE
BIRNEY

SPECIAL NOTE

NOTES TO THE USER

MICROFICHE INDEX
BIRNEY / HARDIN SE

NW NE
SW SE

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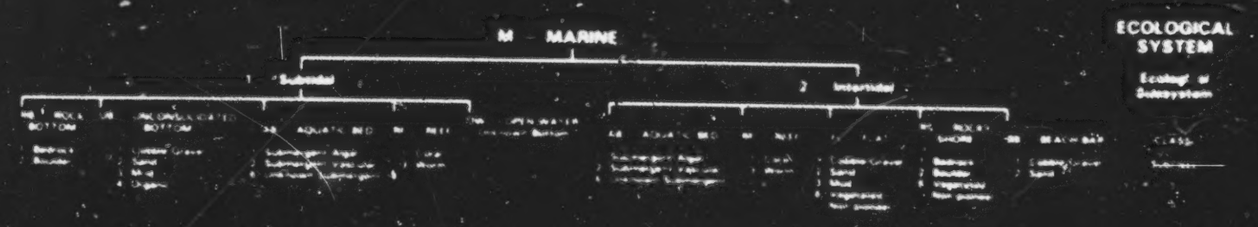

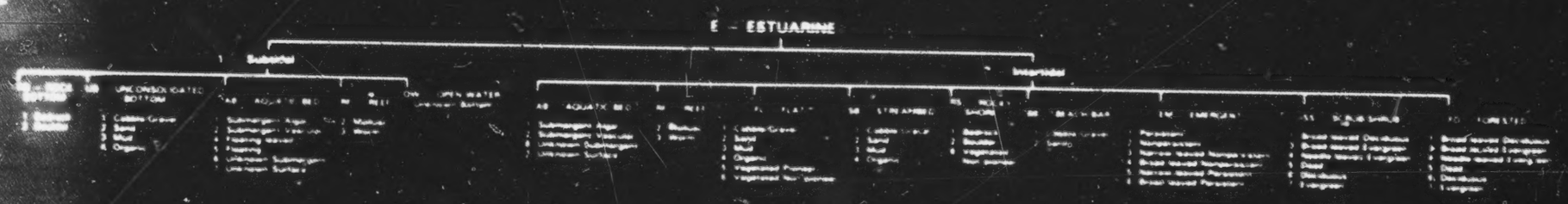

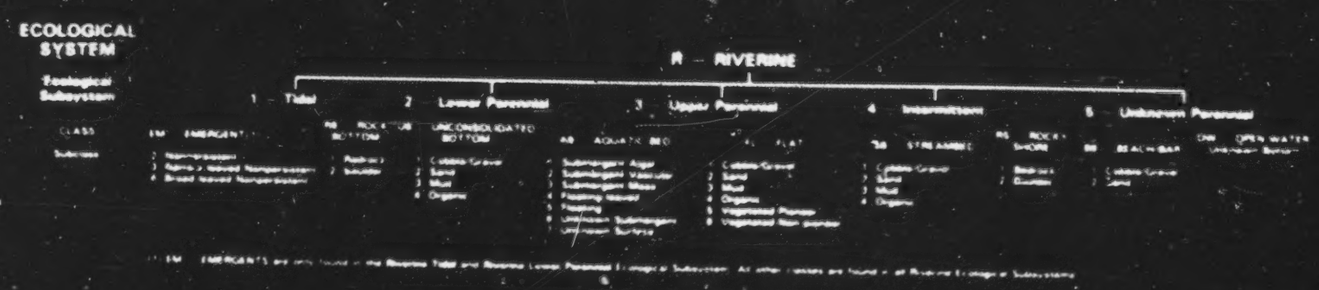

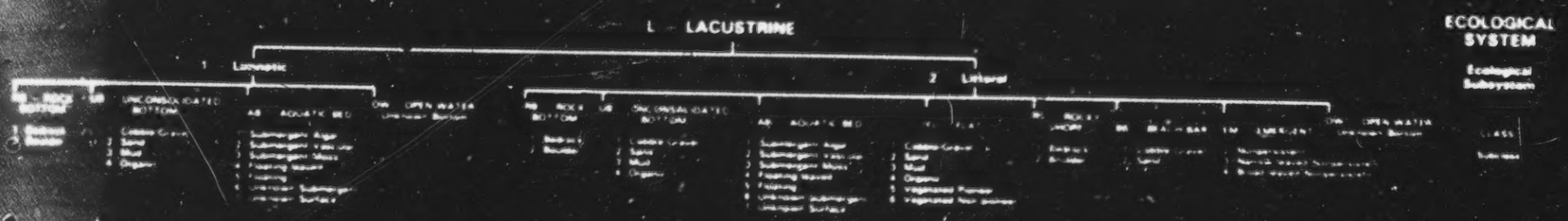

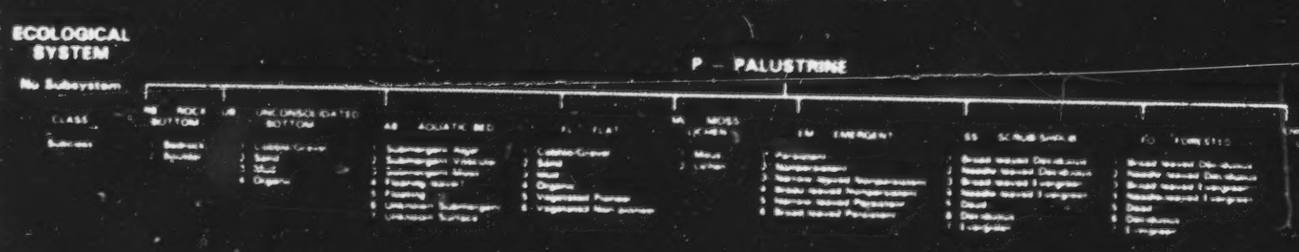

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WATER REGIME(1)										WATER CHEMISTRY				SOIL	SPECIAL MODIFIERS	
Non Tidal				Tidal						Coastal Salinity	Inland Salinity	pH Modifiers for all Fresh Water				
A Nontidal	C Intermittently Flooded	E Artificial	H Intermittently Exposed/Permanent	K Artificial	N Subtidal	Q Intermittently Exposed	V Diked/Impounded	Z Saturated		1 Hypersaline	5 Hypersaline	2 Acid		1 Organic	b Beaver	d Partially Drained/Ditched
B Permanently Flooded	F Semipermanently Flooded	G Intermittently Exposed/Permanent	J Intermittently Exposed/Temporary	L Intermittently Flooded	P Regularly Flooded	R Irregularly Exposed	W Farmed			3 Euhaline	6 Euhaline	3 Circumneutral		2 Mineral	f Farmed	h Diked/Impounded
										4 Mixosaline (Brackish)	7 Mixosaline	4 Alkaline				r Artificial
										5 Polyhaline	8 Freshwater					s Spoil
										6 Mesohaline						x Excavated
										7 Oligohaline						
										8 Fresh						

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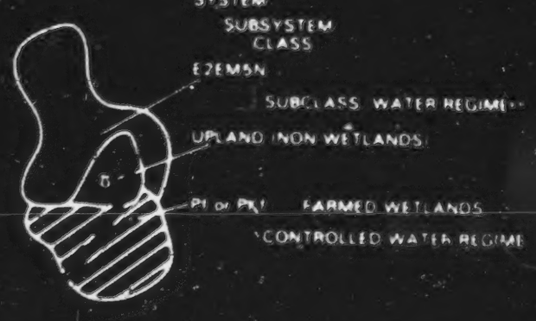

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379 426

NATIONAL [illegible] TORY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LACEY GULCH QUADRANGLE
MONTANA
7.5 MINUTE SERIES (TOPOGRAPHIC)

PFL5Ah PEM5C
PEM5C
PFL5A
PEM5C
PEM5J
PFL5A
PEM5Ch
PUB3Ch
PEM5A
PEM5C
PFL5Ch
PEM5C
PEM5Ch
PEM1Ah
PEM5Ch
PFL5Ah
PFL5A
PEM5J
PEM5C
PEM5Fh
PEM5J
PFL5A
PEM5C
PEM5J
PFL5A
PFL3Ch
PEM5Ch
PUB3Fh
PFL5Ah
PEM5C
PFL5Ch
PEM1Ch
PEM5Fh
POWFh

BIG HORN CO

HARDIN SE
BIRNEY

LACEY GULCH, MONT

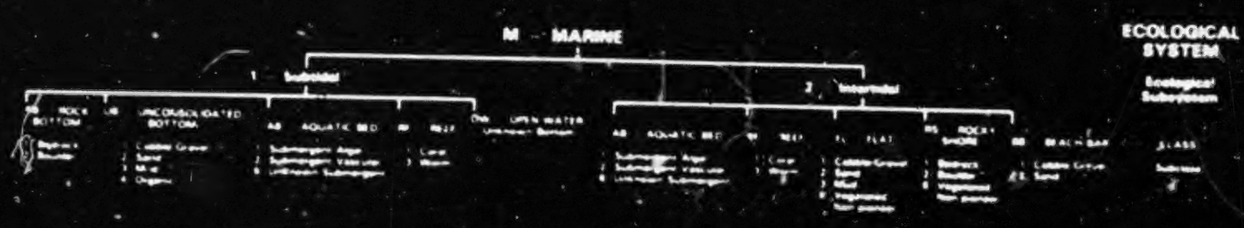
MICROFICHE INDEX
BIRNEY (HARDIN SE)

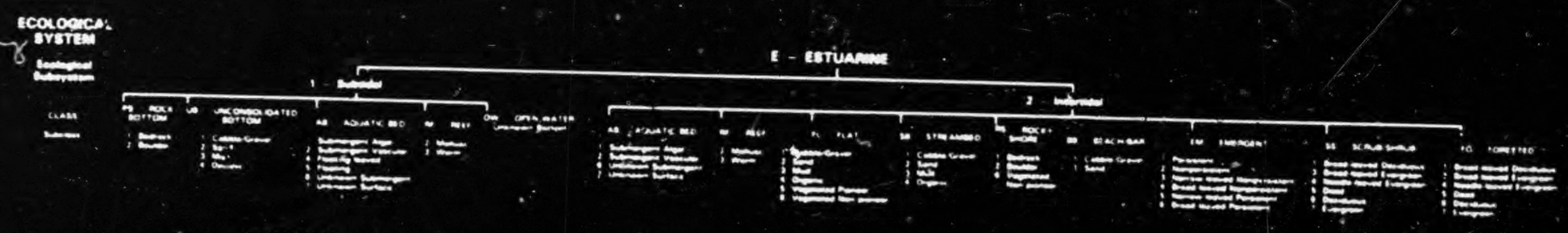
NW	NC	NE
SW	SC	SE

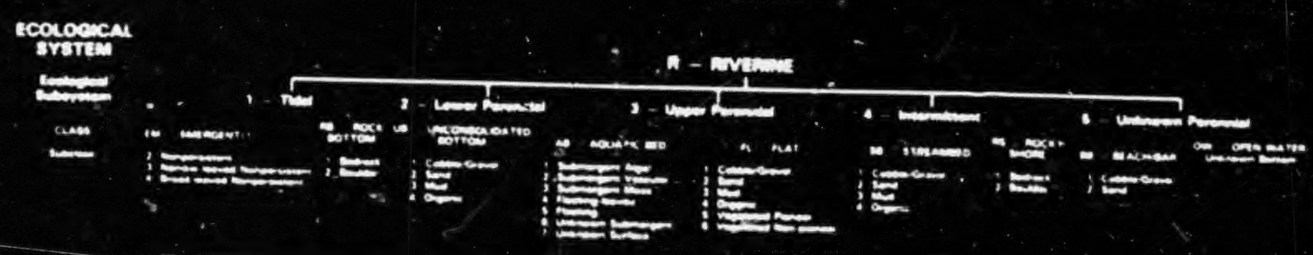
2

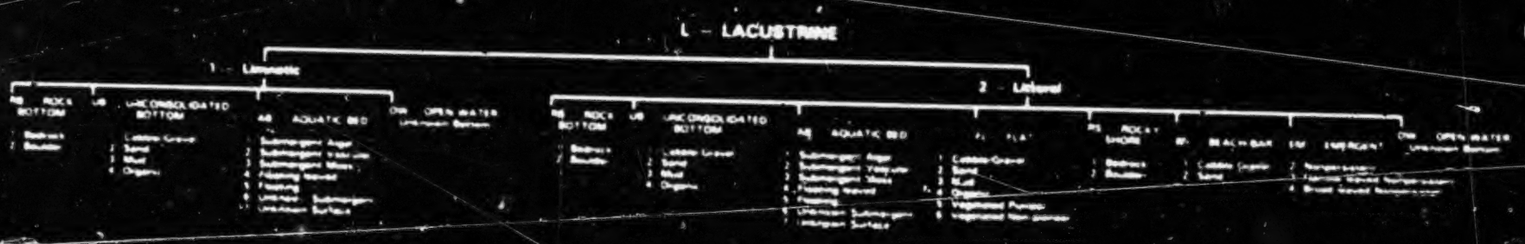
WETLAND LEGEND

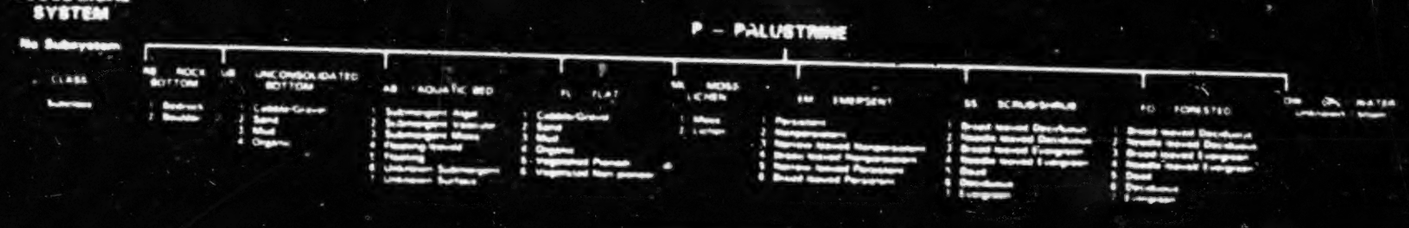
0 – Primarily represents upland areas, but may include unclassified wetlands such as man-modified areas, non photo-identifiable areas and/or unintentional omissions











MODIFYING TERMS

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WATER REGIME(1)		WATER CHEMISTRY			SOIL	SPECIAL MODIFIERS
Non-Tidal	Tidal	Coastal Salinity	Inland Salinity	pH Modifiers for all Fresh Water		
A Temporary B Saturated C Seasonal D Seasonal Well-drained E Seasonal Saturated F Semipermanent G Intermittently Exposed	H Permanent J Intermittently Flooded K Artificial L Intermittently Exposed-Permanent M Intermittently Flooded-Temporary N Saturated-Semipermanent-Seasonal V Unknown	1 Hypersaline 2 Eusaline 3 Mixohaline (Brackish) 4 Polysaline 5 Mesohaline 6 Oligohaline 0 Fresh	7 Hyperhaline 8 Eusaline 9 Mixohaline 0 Fresh	s Acid t Circumneutral u Alkaline	1 Organic 2 Mineral	1 Diked/Impounded 2 Artificial 3 Spoil 4 Excavated

(1) Information on the water regime modifiers found on this legend, but not found in the classification system, may be obtained from the above listed source.

SPECIAL NOTE

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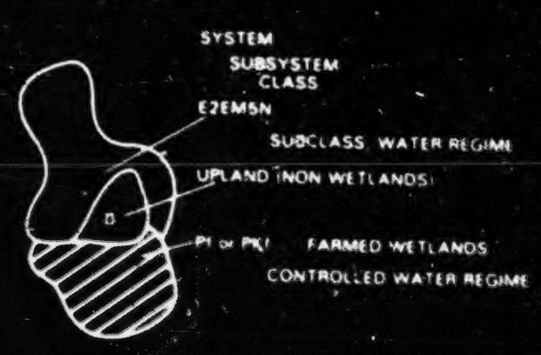
SYMBOLOGY EXAMPLE



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379427

C-2

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PEMSKx
PEM5B
PEM5A
PSS1A
PFL3Ch
PEM5Ch
PEM5J
PEM5C
PSS1Ah
PEM1Ah
PEM5Ah
PAB7Fh
PFL5A
PFL5Ah
R2OWF
PEM5A
PEM5B
PEM5C
PEM5J
PEM5Ch
PEM5Ah
PFL3Ch
PSS1A
PEM5A
PEM5C
PEM5J
PFL5A
PFL5Ah
PEM5J
PFL5A
R2OWF
PEM5B
PEM5C
PEM5B
PEM5C
PEM5A
PEM5A
PEM5A

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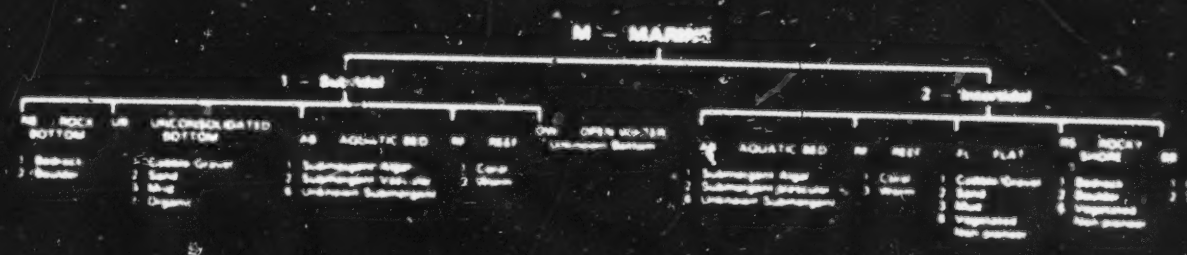

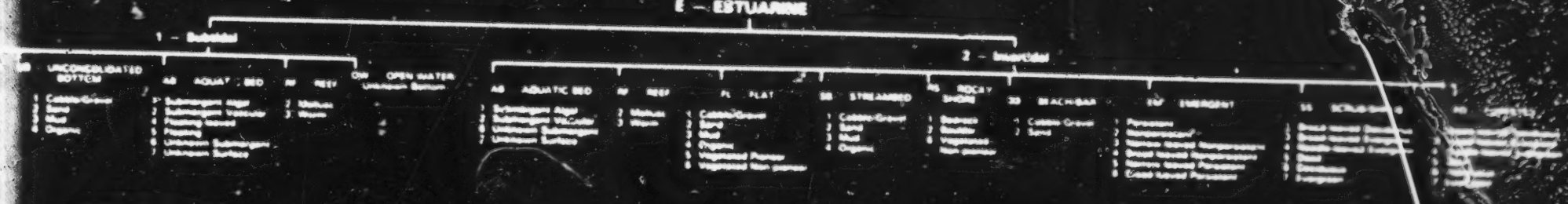

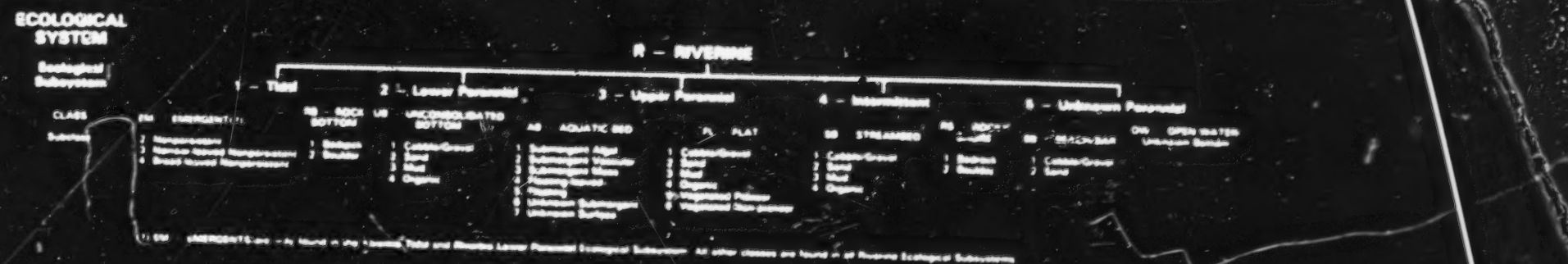

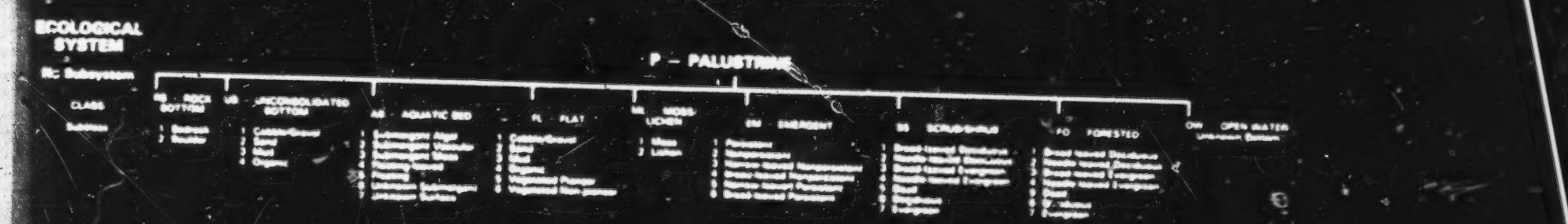

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WATER REGIME(1)								WATER CHEMISTRY								SOIL	SPECIAL MODIFIERS						
Non-Tidal				Tidal				General Salinity				Salinity / Chemistry											
												pH Modifiers for all Fresh Water											

(1) Additional water regime modifiers found on this legend, but not found in the classification system, may be obtained from the above listed source.

SPECIAL NOTE

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SYMBOLOGY EXAMPLE

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379 428

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

HOLMES RANCH QUADRANGLE

C-2

PEMIAh PEMIFh PEMIB PEM5A PEM5Ah PEM5Ch PEM5J PFL3A PFL5Ch PFL5Ah PUB3Fh POWFh

SCALE 1:24000

Published by the Geological Survey

BIRNEY

HOLMES RANCH, MONT

MICROFICHE INDEX

BIRNEY (HARDIN SE)

NW	NC	NE
SW	SC	SE

WETLAND LEGEND

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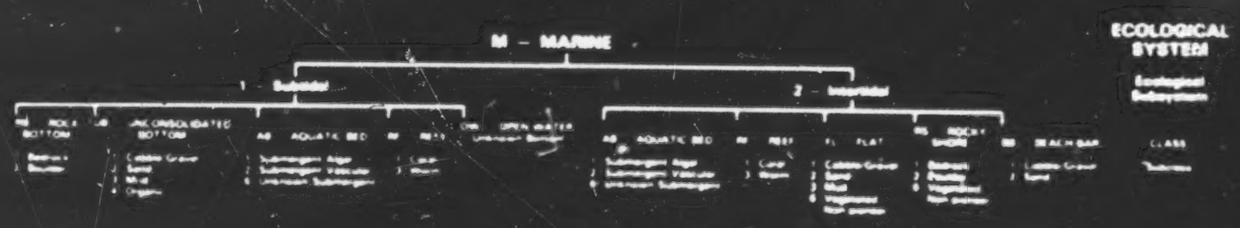

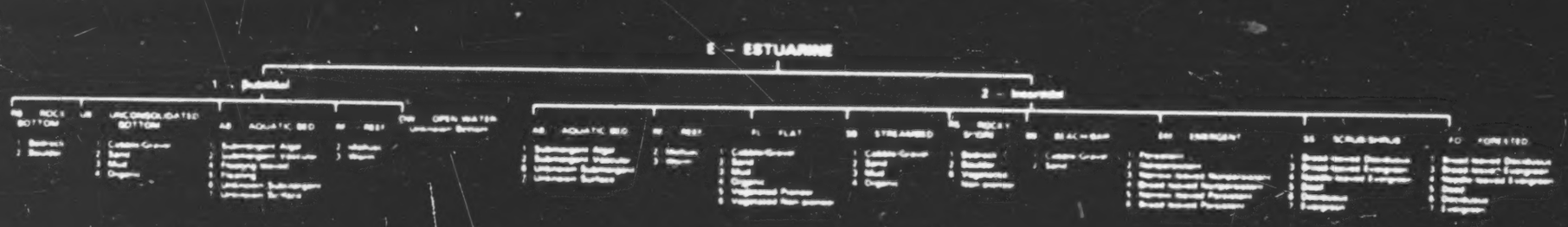

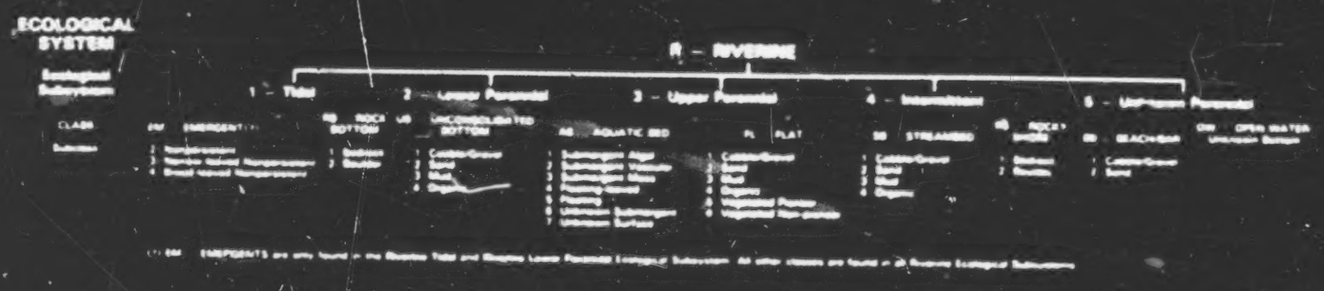

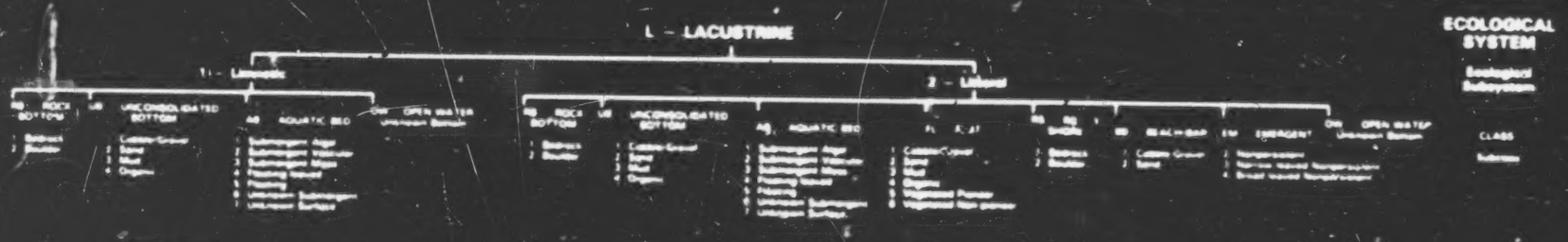

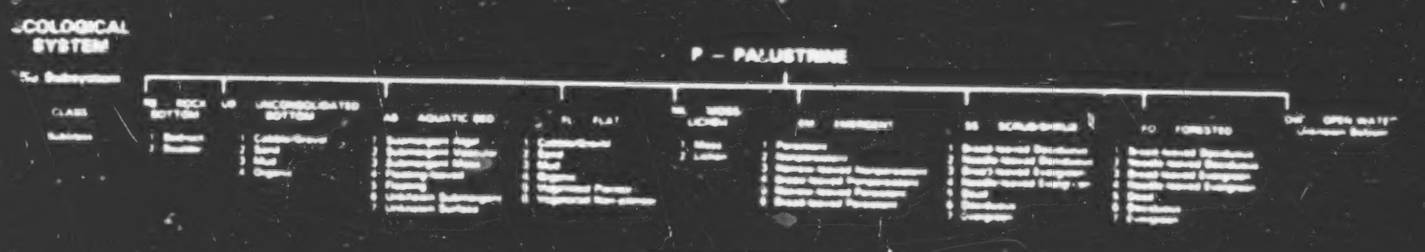

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WATER REGIME (1)				WATER CHEMISTRY			SOIL	SPECIAL MODIFIERS
Non-Tidal		Tidal		Coastal Salinity	Inland Salinity	pH Modifiers for all Fresh Water		
Permanently Flooded	Intermittently Exposed	Subtidal	Irregularly Flooded	Hyperhaline	Hyperhaline	Acid	Organic	Beaver
Intermittently Exposed	Permanent	Irregularly Exposed	Regularly Flooded	Euhaline	Euhaline	Circumneutral	Mineral	Partially Drained/Ditched
Semipermanently Flooded	Artificial	Regularly Flooded	Irregularly Exposed	Mixohaline (Brackish)	Mixosaline	Alkaline		Farmed
Seasonally Flooded	Semipermanently Flooded-Drained	Permanently Flooded	Artificial	Polyhaline	Polysaline			Diked
Saturated	Seasonally Flooded-Drained	Intermittently Exposed	Permanently Flooded					Farmed
Artificially Flooded	Saturated-Drained		Intermittently Exposed					
	Artificially Flooded-Drained							
	Intermittent							

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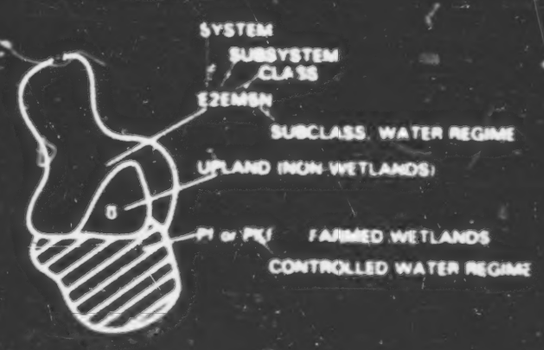

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3 7 9 4 2 9

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PINE BUTTE SCHOOL QUADRANGLE

C-2

PEMSA
PEMSAh
PEMSCh
PEMSA
PEMSFh
PFLSCh
PEMSCh
POWFh
PEM5C
PFL3Eh
PFL5Ch
PEM5B
PEM5J
PEM5J
PEM5J
PFL5Ch
PAB6Fh
PEM5J
PFL5Ch
U
PEM5J
PEM5B
PEM5A
PEM5B
PEM5J
PFL5Ah
POWFh
POWFh
PEM5C
POWFh
PFL5Ch
PEM5Ah
POWFh
PEM5Ah
PEM5B
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PUB3Fh
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PFL5Ch
PFL3Ah
PFL3Ch
PEM5Ah
PEM5B
POWFh
PEM5B
PEM5Fh
POWFh
PEM5Fh
HARDIN SE published by the Geological Survey
BIRNEY
SCALE 1:24 000
PINE BUTTE SCHOOL, MONT.
Light duty road, all weather, improved surface
Unimproved road, fair or dry weather

MICROFICHE INDEX
BIRNEY (HARDIN SE)

NW	NC	NE
SW	SC	SE

WETLAND LEGEND

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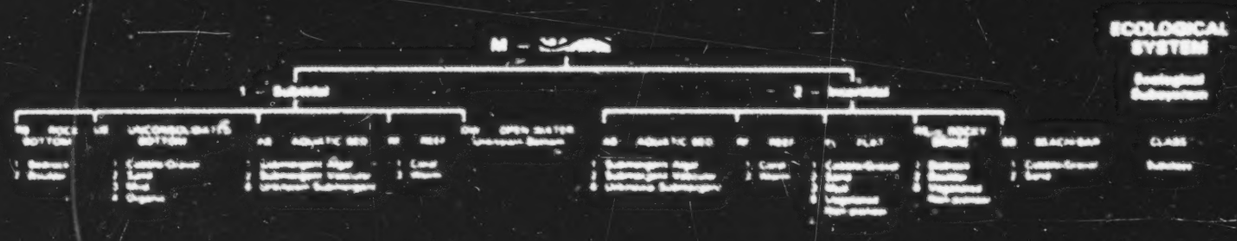

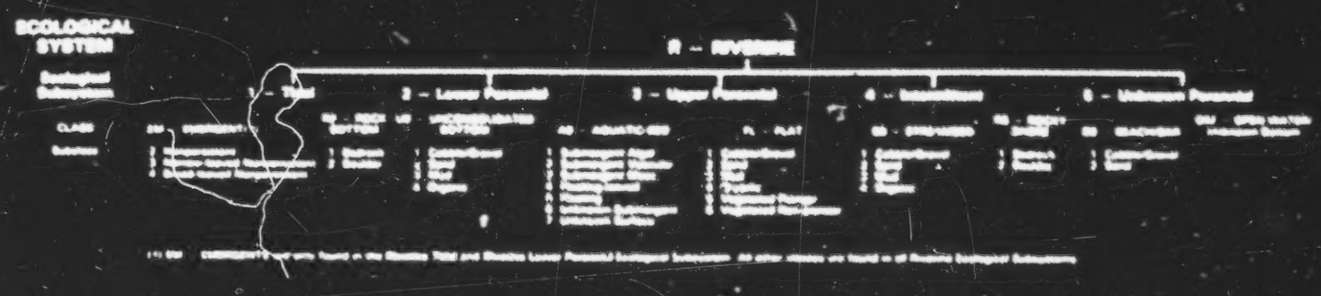

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WATER REGIMES			WATER CHEMISTRY			SOIL	SPECIAL MODIFIERS	
Nontidal	Tidal		Hyperhaline	Euhaline	Mixohaline (Brackish)	Organic	Beaver	Partly Drained
Permanently Flooded	Subtidal	Permanently Flooded-Tidal	Polyhaline	Mesohaline	Oligohaline	Mineral	Diked/Impounded	Farmed
Intermittently Exposed	Irregularly Exposed	Artificially Flooded	Metahaline	Eucaline	Mixosaline		Excavated	
Semipermanently Flooded	Regularly Flooded		Hypersaline	Mixohaline (Brackish)	Fresh			
Seasonally Flooded								
Saturated								
Temporarily Flooded								
Intermittently Flooded								

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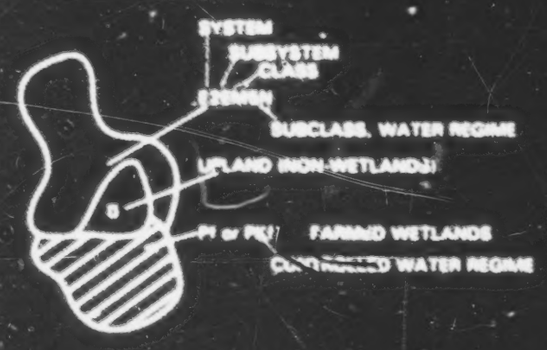

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3794430

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

FORKS RANCH QUADRANGLE
MONTANA–BIG HORN CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

105°30'
45°07'30"

PEM5Ah
PSS1Ah
R2OWF
PSS1A
PEM5C
PSS1Ah
PEM5A
U
PSS1A
R2OWF
PEM5E
PEM5Ah
PEM5A
PEM5A
PEM5F
PEM5F
PEM5E
PEM5F
PEM5A
PEM5F
R2OWF
PSS1A
PEM5E
U
PEM5Ah
PSS1A
U
PSS1Ah
PEM5Ah
PFL3Ah
PFL3Ch
PEM5A
PEM5E
PEM5A
PFL3Ch
PSS1A
PEM5A
PFL3Ch
PUB3Fh
PFL3Ch
PEM5J
PEM5A
PEM5A
POWFh
PSS1Ah
U
PEM5B
PSS1Ah
PEM5A
PEM5Ah
PEM5Ah
PSS1A
PEM5A
PEM5C
PEM5J
PEM5A
PEM5A
PSS1J
PEM5C
PEM5Ch
PEM5A
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PEM5C
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PEM5C
PEM5J
PEM5A
PSS1K
PEM3C
POWFh
PEM5B
PEMICh
PEM5C
PFL3Ch
PFL5Ch
PFL5Ch
PEMICh
POWFh
PEM5A
PEM5C
PEM5C
PFL5A9
PEMICh
PFL3Ch

HARDIN SE
BIRNEY

ROAD CLASSIFICATION
Improved surface

MICROFICHE INDEX
BIRNEY (HARDIN SE)

NW	NC	NE
SW	SC	SE

WETLAND LEGEND

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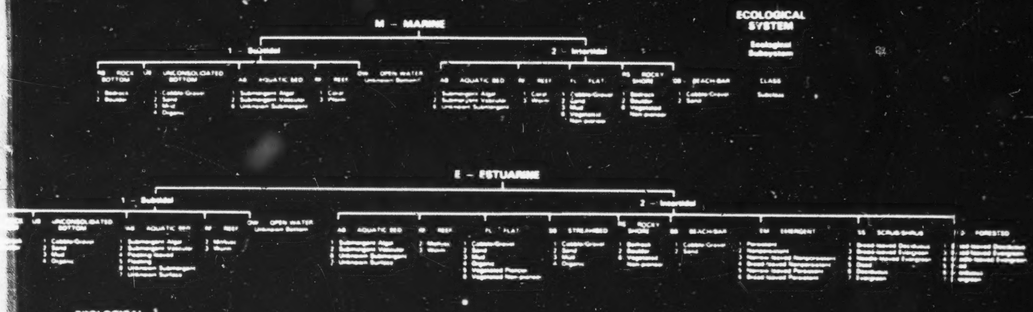

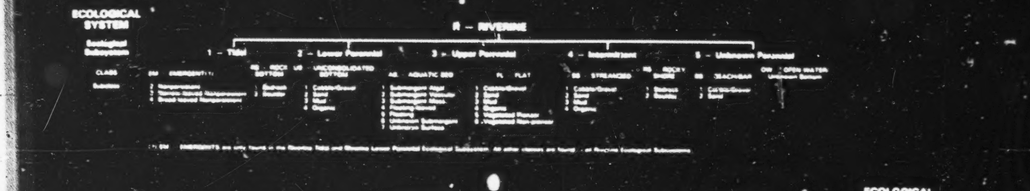

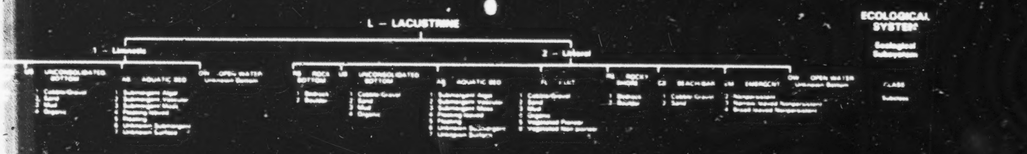

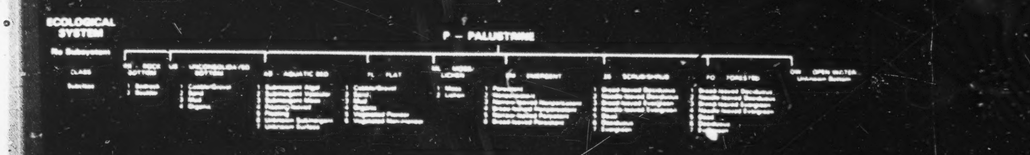

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(1) All the water regime modifiers found on this legend, but not found in the classification system, may be obtained from the above listed source.

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SYMBOLOGY EXAMPLE

NOTES TO THE USER

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379 431

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

HAMILTON DRAW QUADRANGLE
MONTANA
7.5 MINUTE SERIES (TOPOGRAPHIC)

PEMA
PEMB
PEMC
PEM5A
PEM5B
PEM5C
PEM5J
PEM5Ah
PEM5Ch
PEM5Fh
PEMIA
PEMIB
PEMIC
PEMIFh
PEMIJ
PEMIAh
PEMICh
PFL5C
PFL5Ch
PFL5A
PFL5J
PFL5Ah
PFL3Ch
PFL6Ah
PFLA
PFLAh
PFLCh
PFO1J
PFO1Ah
POWFh
PUB3Fh
PSS1J
PAB7Fh
PAB7Ch
U
FOREST
Gravel Pits
Grassy Spring
Little Beaver Spring
Hoover Reservoir
Davidson
NORTH CREEK
ROSEBUD CO
BIG HORN CO
POWDER RIVER CO
BIG HORN CO
HARDIN SE
BIRNEY
HAMILTON DRAW, MONT.
SPECIAL NOTE
NOTES TO THE USER

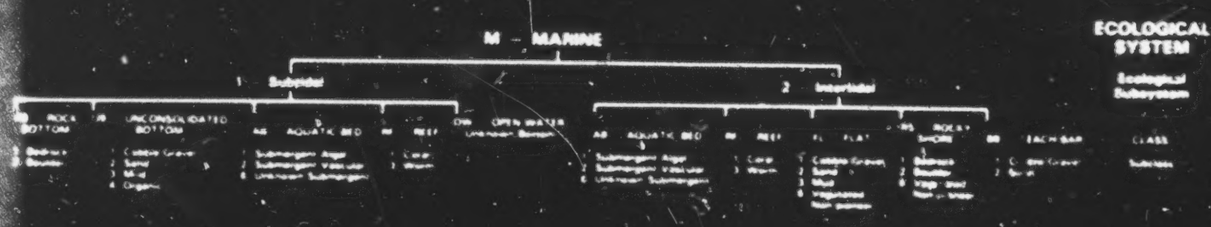
MICROFICHE INDEX
BIRNEY (HARDIN SE)

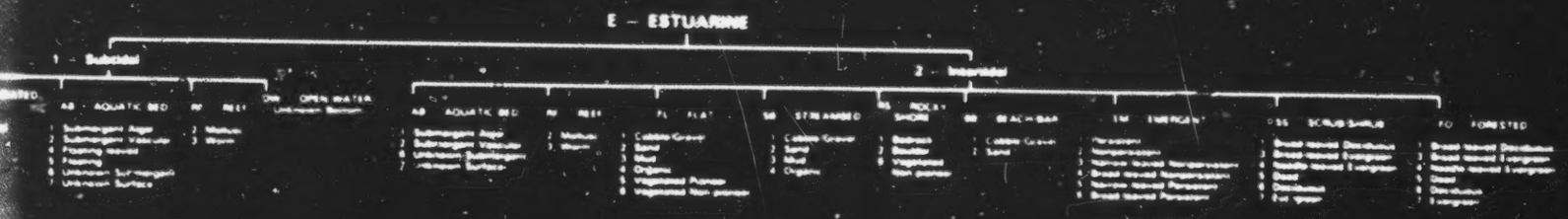
NW	NC	NE
SW	SC	SE

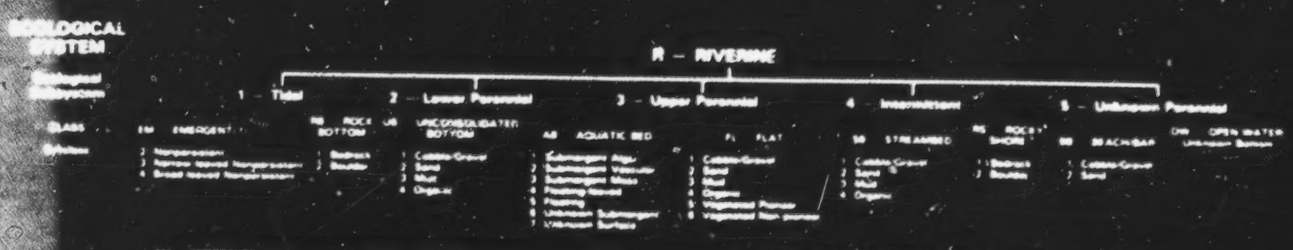
C-2

WETLAND LEGEND

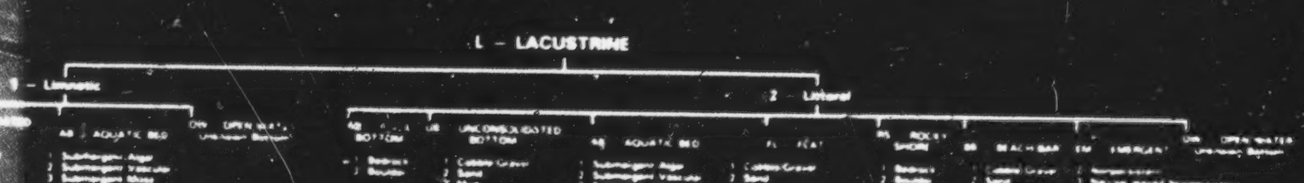
U Primarily represents upland areas, but may include unclassified wetlands such as man-modified areas, non photo-identifiable areas and/or unintentional omissions

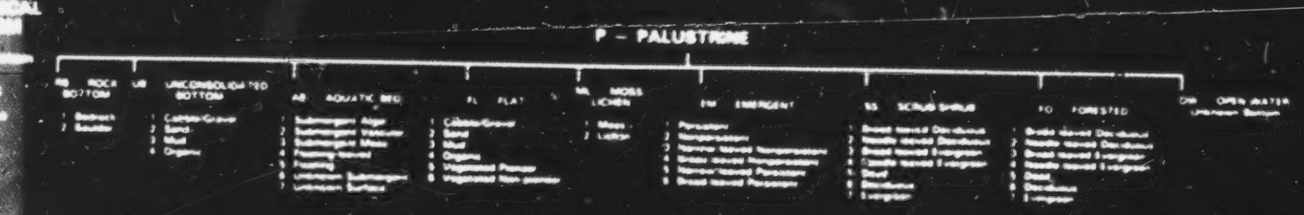






EM EMERGENTS are only found in the Riverine Tidal and Riverine Lower Perennial Ecological Subsystem. All other classes are found in all Riverine Ecological Subsystems.





MODIFYING TERMS

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WATER REGIME(1)	WATER CHEMISTRY			SOIL	SPECIAL MODIFIERS
	Coastal Salinity	Inland Salinity	pH Modifiers for all Fresh Water		
Tidal	1 Hypersaline	1 Hypersaline	a Acid	c Organic	b Beaver
1 Subtidal	2 Eusaline	2 Eusaline	c Circumneutral	m Mineral	d Partially Drained/Ditched
2 Irregularly Exposed	3 Mixosaline	3 Mixosaline	i Alkaline		f Farmed
3 Regularly Flooded	4 Fresh	4 Fresh			h Diked/Impounded
4 Irregularly Flooded					r Artificial
5 Permanently Flooded					s Spoil
6 Subtidal/Irregularly Exposed					x Excavated
7 Subtidal/Permanently Flooded					
8 Intermittently Exposed/Permanent					
9 Semipermanently Flooded					
A Intermittently Flooded/Temporary					
B Saturated/Temporary					
C Intermittently Flooded/Seasonal					
D Artificial					
E Intermittently Exposed					
F Semipermanent/Seasonal					
G Intermittently Flooded/Saturated					
H Permanent/Saturated					
J Intermittently Flooded/Temporary					
K Artificial/Irregularly Exposed					
L Artificial/Irregularly Flooded					
M Artificial/Seasonal					
N Artificial/Permanent					
P Diked/Impounded					
R Diked/Impounded/Partially Drained/Ditched					
T Diked/Impounded/Farmed					
V Diked/Impounded/Partially Drained/Ditched/Farmed					
W Intermittently Flooded/Farmed					
Y Saturated/Semipermanent/Seasonal					
Z Artificial/Saturated/Semipermanent/Seasonal					
0 Saturated/Temporary/Tidal					
1 Semipermanent/Tidal					
2 Intermittently Exposed/Tidal					
U Unknown					

Additional water regime modifiers found on this legend, but not found in the classification system, may be obtained from the above listed source.

SPECIAL NOTE

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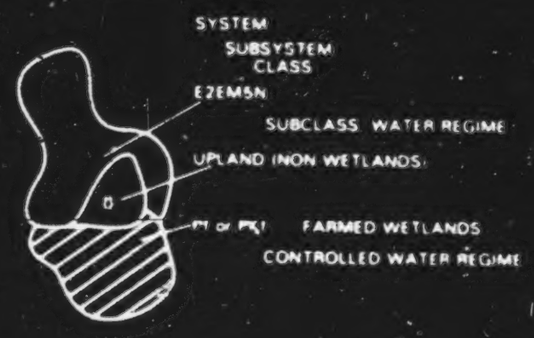

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3 7 9 4 3 8

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

NATIONAL WETLANDS
STATE DEPARTMENT

OTTER TAILRANGE

C-2

PEM5C
PEM5Ch
PEM1C
PEM1A
PEM5Ch
PEM5C
R20WF
PEM5Ch
PFL3A
PEM5Ch
PEM5Ch
PEM5Ch
PEM5Ah
PEM5J
R20WF
PFL3Ch
PEM5Ah
PFL3Ch
PFO1Ch
PEM5Ch
PEM5A
PEM3Fh
PSS1Ah
PUB3Fh
PFL5Ch
PEM1Ah
PEM5Ch
R30WF
PEM5Jh
PEM1Ch
PEM1A
PEM5Fh
PEM5Ch
PEM1C
PEM1Ah
PEM1Ch
PEM6Ch
PEM5Ah
PEM5Ch
R20WF
PEM1B
PO/WFh
PFO1Ah
PEM1Jh
PEM1Ch
PEM1Ah
PEM5B
PFL3Ch
PEM5Fh
PEM1C
PEM1C
PFL5Ch
PFLCh
PFL5Ch
PFL3Ch
PEM6Ah
PEM1B
PFL3Ch
R20WF
PEM5Ch
PEM1J
PFL5J
PFLCh
PFL5Ch
HARDIN SE
BIRNEY

SPECIAL NOTE

ROAD CLASSIFICATION
Light duty
Improved surface
OTTER MOUNT

MICROFICHE INDEX
BIRNEY (HARDIN SE)

NW	NC	NE
SW	SC	SE

WETLAND LEGEND

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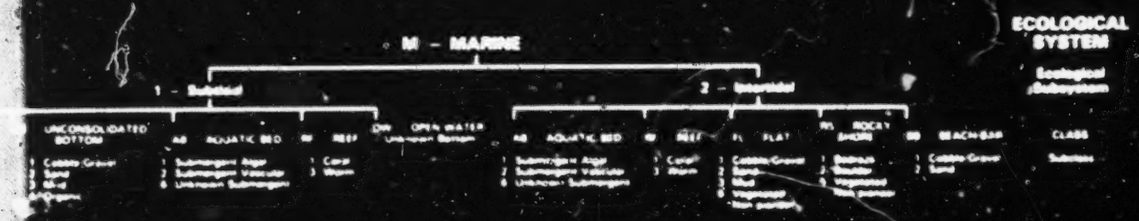

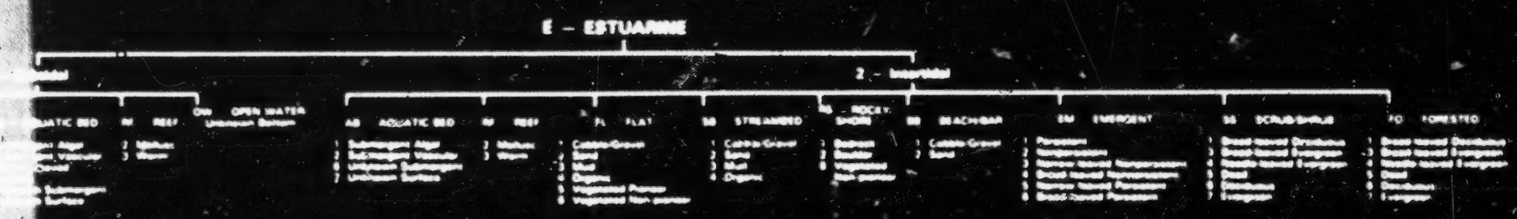

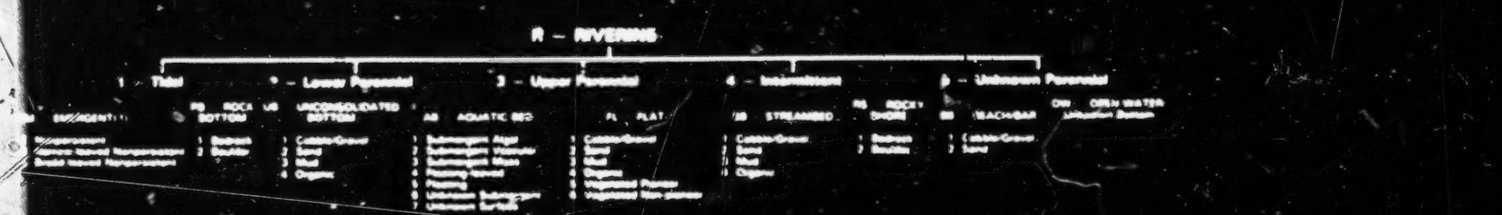

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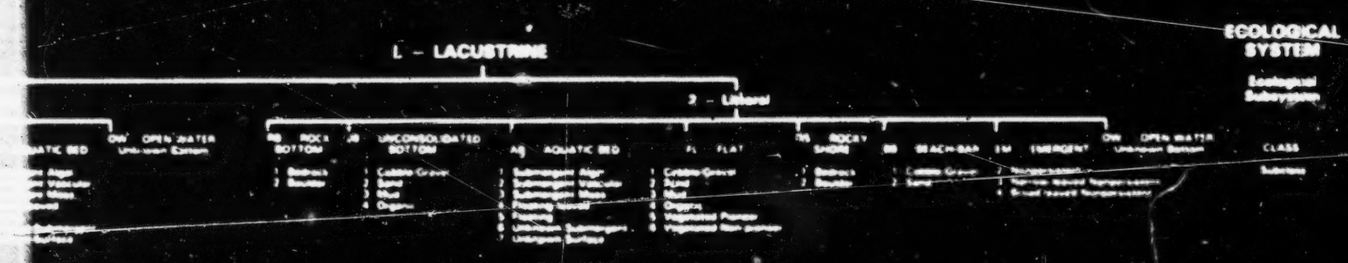

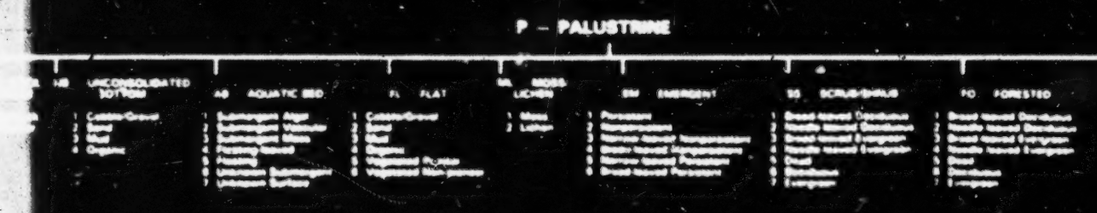

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WATER REGIME(S)	WATER CHEMISTRY	SOIL	SPECIAL MODIFIERS
Tidal Irregularly Exposed Regularly Flooded Irregular Permanent Intermittent Temporary Saturated Artificial Diked/Impounded Seasonal Tidal Temporary Tidal Permanent Tidal Unknown	Coastal Salinity Hypersaline Eusaline Mixohaline (Brackish) Polysaline Mesohaline Oligohaline Fresh Inland Salinity / pH Modifiers for all Fresh Water Hyperhaline Eusaline Mixohaline (Brackish) Polysaline Mesohaline Oligohaline Fresh Acid Circumneutral Alkaline	1 Organic 2 Mineral	1 Saturated 2 Artificially Drained/Ditched 3 Farmed 4 Diked/Impounded 5 Artificial 6 Partly Drained 7 Excavated

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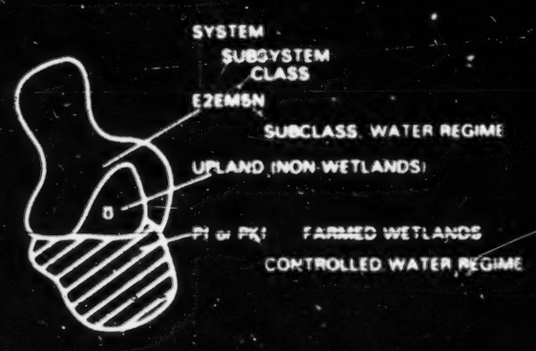

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3 7 9 4 3 9

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

REANUS CONE QUADRANGLE
MONTANA—POWDER RIVER CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

C-2

PFL3C
PEM5C
PFL5Ch
PEM5J
PEM5C
PEM5C
POWFh
PEM5Ch
PEM5A
PEM5C
PEMIA
PFOIC
PEMIC
PEM5C
PFL5Ah
PFL3Ah
PFL3Ch
PEMIC
PEM5Ah
PFL5Ah
PUB3Fh
PSSIA
PEM5Ah
PAB7Fh
PEM5A
PEMIA
POWFh
PFL5Ch
PFL3C
PEM5Ch
R20WF
PFL6Ah
PEM5Ah
PEM5C
R20WF
PFL3Ch
PEM5A
PFL5Ch
R20WF
PFL3A
PEM5J
R20WF
PEM5Ch
PFL5Ch
PFL3C
PEM5A
PEM5C
PFL5A
PFL5Ch
PEM5Ch
PFL5Ch
PEM5B
PFL5Ch
PFL5Ch
PFL5Ch
PEM5C
PFL5A
PFL5Ah
PEM5A
PFL5Ah
PEM5B
PEM5C
PFL5Ch
PFL5Ch
PFL5Ch

45°07'30"
108°00'
REANUS CONE, MONT.

SPECIAL NOTE

NOTES TO THE USER

MICROFICHE INDEX
BIRNEY (HARDIN SE)

NW	NC	NE
SW	SC	SE

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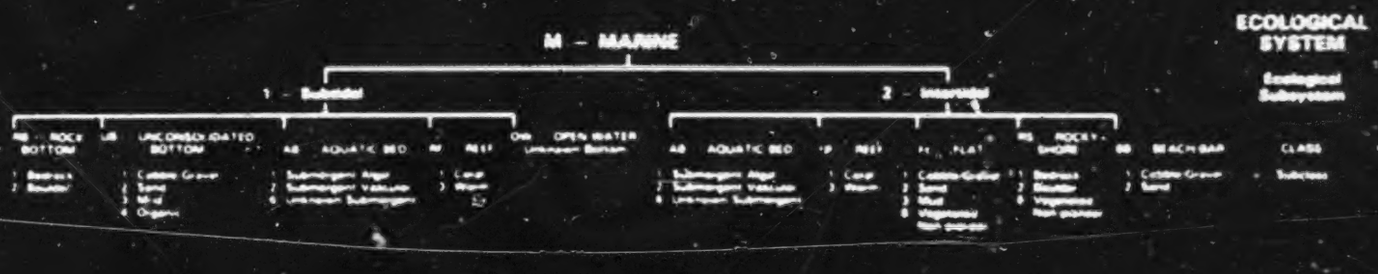

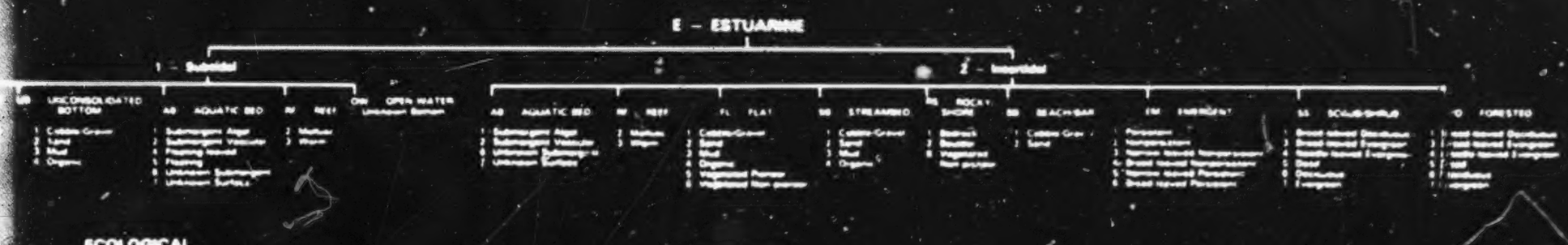

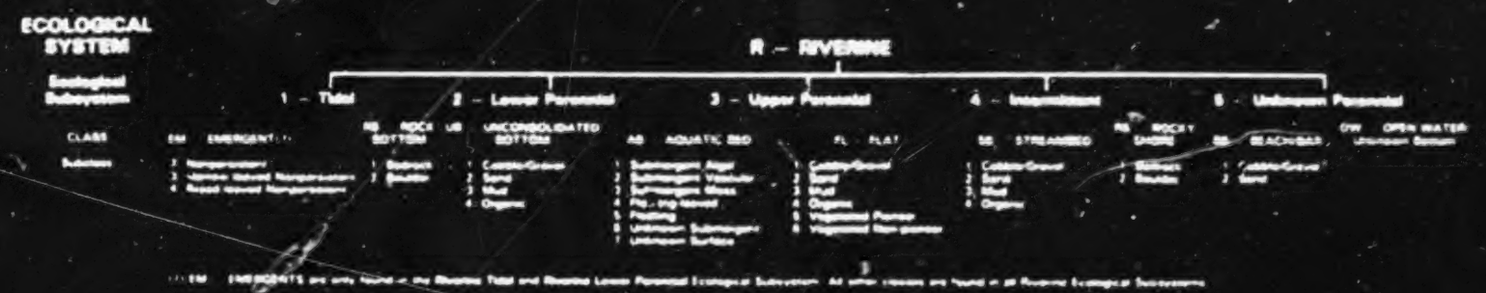

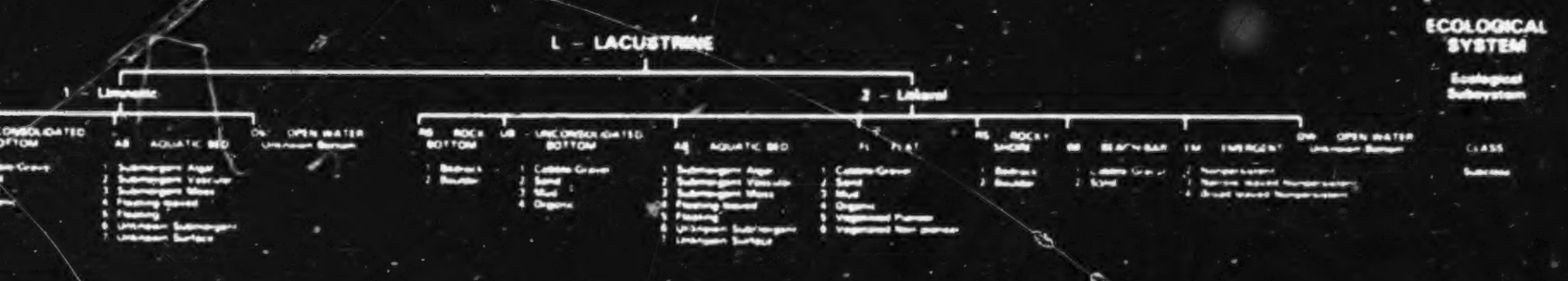

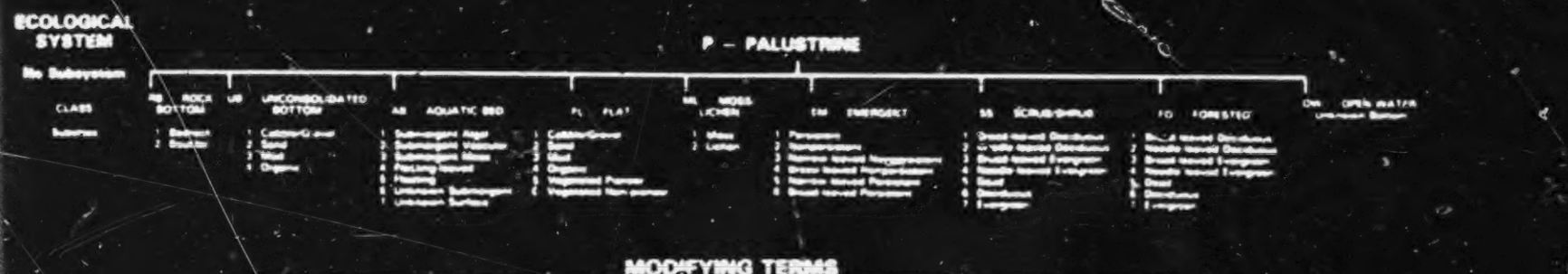

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WATER REGIME(1)										WATER CHEMISTRY										SOIL	SPECIAL MODIFIERS		
Non-Tidal				Tidal						Coastal Salinity		Inland Salinity		pH Modifiers for all Fresh Water									

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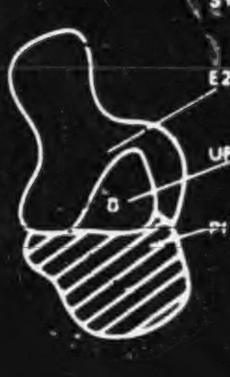

SYSTEM
SUBSYSTEM
CLASS
E2EM5N
SUBCLASS, WATER REGIME
(UPLAND (NON WETLANDS))
P1 or PR1 FARMED WETLANDS
CONTROLLED WATER REGIME

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379 440

C-2

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

PEM5J
PFL5Ah
PFL3Ch
PEM5A
PEM5C
PSS1A
PEM5A
PFL5Ah
PEM5A
POWFh
PEM5Ah
PEM5J
PEM5A
PEM5J
PEM5A
PEM5J
PEM5A
PEM5A
PFO1C
PFO1A
PEM5A
PEM5C
PEM5C
PEM5C
PFL5Ch
PFO1C
PFO1A
PEM5C
PEM5B
POWFh
PEM5A
PEM5J
PEM5A
PEM5J
PEM5A
PEM5A
PEM5A

WETLAND LEGEND

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M – MARINE

1 – Subtidal

AB AQUATIC BED
RF REEF
UB UNCONSOLIDATED BOTTOM
OW OPEN WATER

2 – Intertidal

AB AQUATIC BED
RF REEF
FL FLAT
RS ROCKY SHORE
UB UNCONSOLIDATED BOTTOM
BB BEACH/BAR

ECOLOGICAL SYSTEM
Ecological Subsystem
CLASS
Subclass

E – ESTUARINE

1 – Subtidal

AB AQUATIC BED
RF REEF
OW OPEN WATER

2 – Intertidal

AB AQUATIC BED
RF REEF
FL FLAT
SB STREAMBED
RS ROCKY SHORE
BB BEACH/BAR
EM EMERGENT
SS SCRUB/SHRUB
FO FORESTED

R – RIVERINE

1 – Tidal
2 – Lower Perennial
3 – Upper Perennial
4 – Intermittent
5 – Unknown Perennial

EM EMERGENT
RS ROCKY SHORE
UB UNCONSOLIDATED BOTTOM
AB AQUATIC BED
FL FLAT
SB STREAMBED
RS ROCKY SHORE
BB BEACH/BAR
OW OPEN WATER

L – LACUSTRINE

1 – Limnetic

AB AQUATIC BED
OW OPEN WATER

2 – Littoral

RS ROCKY SHORE
UB UNCONSOLIDATED BOTTOM
AB AQUATIC BED
FL FLAT
RS ROCKY SHORE
BB BEACH/BAR
EM EMERGENT
OW OPEN WATER

ECOLOGICAL SYSTEM
Ecological Subsystem
CLASS
Subclass

P – PALUSTRINE

RS ROCKY SHORE
UB UNCONSOLIDATED BOTTOM
AB AQUATIC BED
FL FLAT
US UNCONSOLIDATED SHORE
EM EMERGENT
SS SCRUB/SHRUB
FO FORESTED
OW OPEN WATER

MODIFYING TERMS

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WATER REGIME(1)	WATER CHEMISTRY	SOIL	SPECIAL MODIFIERS
Tidal	Coastal Salinity / Inland Salinity / pH Modifiers for all Fresh Water	Organic / Mineral	Beaver / Partly Drained/Ditched / Diked/Impounded / Farmed / Artificial

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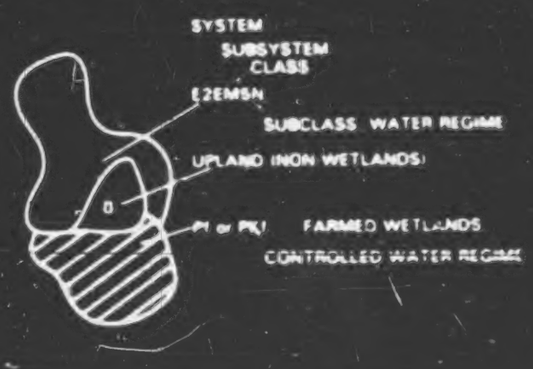

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3 7 9 4 4 1

C2

BEAR CREEK SCHOOL QUADRANGLE

PEM5Ch PEM5Ah PEM5A PEM5C PSS1A PEM5Jh PSS1Ah PEM5Ch PFL5Ah PEM5Ch PEM5C PFL3Ch PFL5Ah POWFh PFL5Ch PEM5B PFL3Ah PFL3Ch PFL5Ch PEM5B U PEM5Ah PFL3Ah PEM5Ah PFL5Ch PEM5Ah PEM5Ah PFL5Ah PEM5B PFL5Ah PEM5Ch PEM5C PFL3Ch PEM5B PEM5Ah PEM5A PFL5Ah PEM5B PEM5Fh PEM5A PEM5B POWFh PFO1Ah PEM5Ch POWFh POWFh PEM5Ah PFL5Ah PEM5Ah PEM5B POWFh PEM5C PSS1Ah PFL5Ah POWFh PEM5Ch PEM5J U PEM5B PEM5A

HARDIN SE
BIRNEY

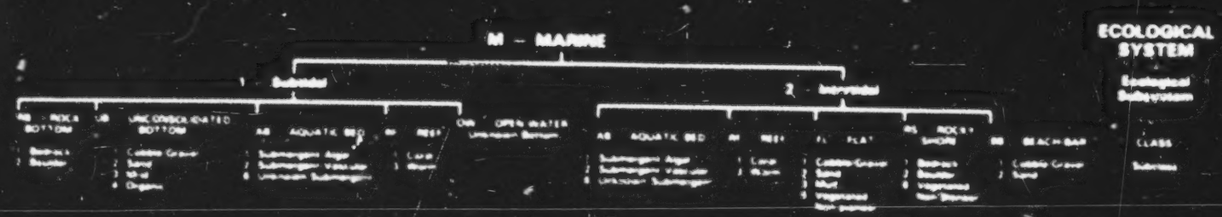
SPECIAL NOTE

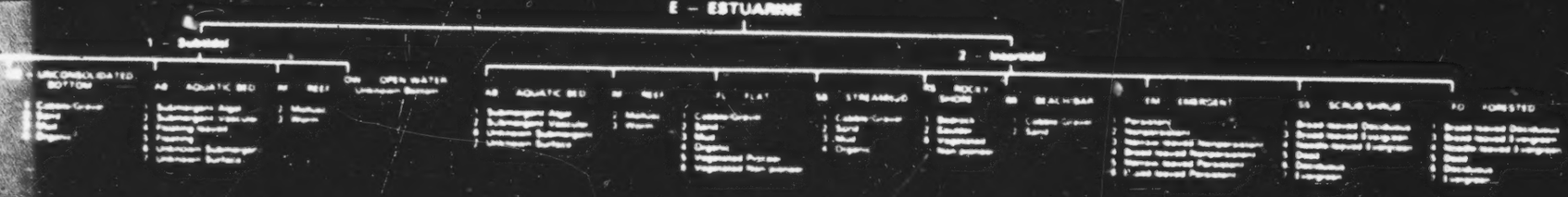
MICROFICHE INDEX
BIRNEY (HARDIN SE)

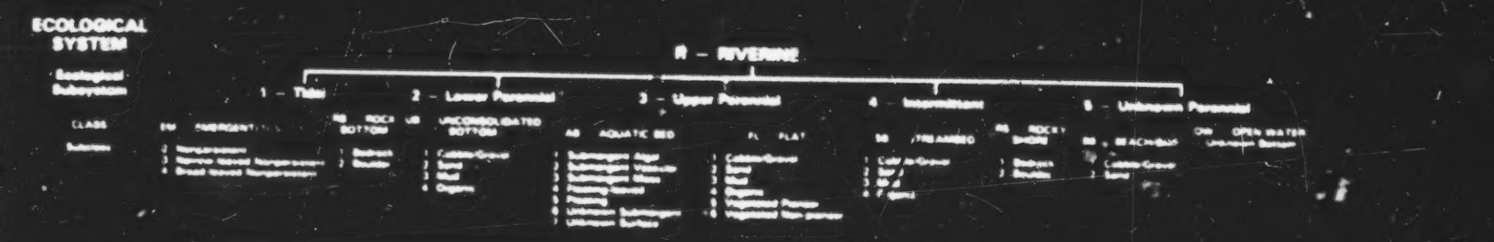
NW	NC	NE
SW	SC	SE

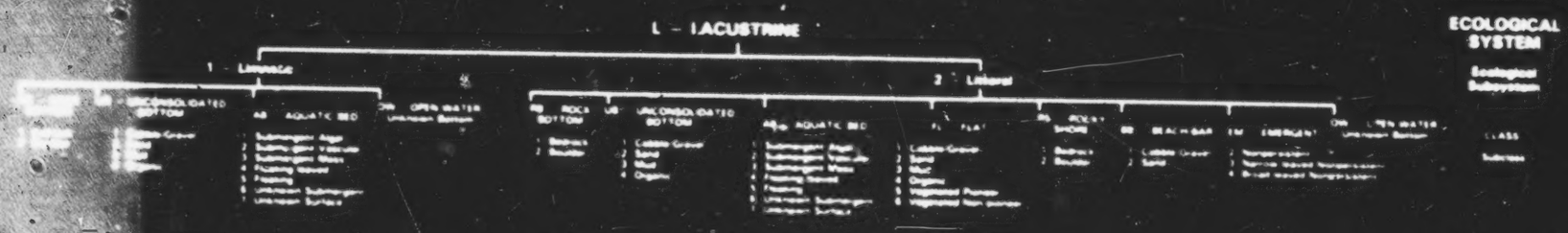
WETLAND LEGEND

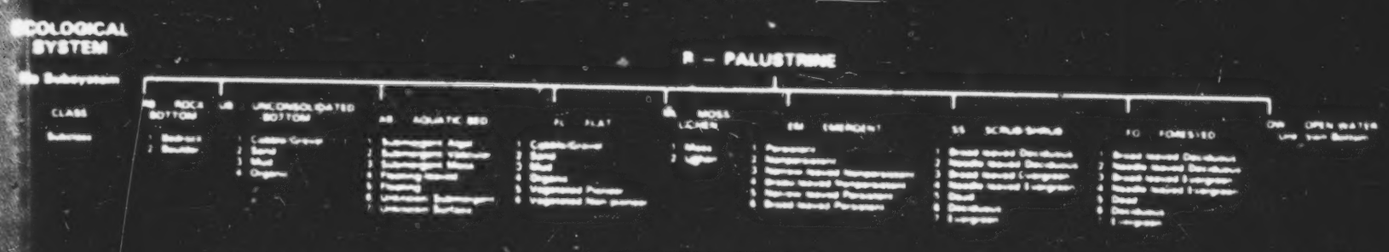
0 – Primarily represents upland areas, but may include unclassified wetlands such as man-modified areas, non-photo-identifiable areas and/or unintentional omissions











MODIFYING TERMS

In order to more adequately describe wetland and aquatic habitats one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy. The farmed modifier may also be applied to the ecological system.

WATER REGIME(1)	WATER CHEMISTRY			SOIL	SPECIAL MODIFIERS
Non-Tidal / Tidal	Coastal Salinity	Inland Salinity	pH Modifiers for all Fresh Water		
A Temporary B Saturated C Seasonal D Intermittently Flooded E Artificially Flooded F Semipermanent, Impounded/Permanent G Intermittently Flooded/Temporary H Permanent/Semipermanent/Spring J Intermittent K Artificial L Intermittently Exposed Z Unknown	5 Hypersaline 6 Euhaline 7 Mixohaline (Brackish) 8 Polyhaline 9 Mesohaline 0 Fresh	5 Hypersaline 6 Eusaline 7 Mixosaline 0 Fresh	h Acid i Circumneutral k Alkaline	o Organic m Mineral	a Beaver b Partially Drained/Ditched c Farmed d Diked/Impounded e Artificial f Spoil g Excavated

Tidal: Subtidal, Irregularly Exposed, Regularly Flooded, Irregularly Flooded, Seasonal Tidal, Temporary Tidal, Semipermanent Tidal, Permanent Tidal, Unknown

(1) Additional water regime modifiers found on this legend, but not found in the classification system, may be obtained from the above listed source.

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SYMBOLOGY EXAMPLE

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3 7 9 4 4 2

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

NATIONAL WETLANDS INVENTORY
UNITED STATES DEPARTMENT OF THE INTERIOR

SAYLE HALL QUADRANGLE

C-2

HARDIN SE
BIRNEY

SPECIAL NOTE

NOTES TO THE USER

MICROFICHE INDEX
BIRNEY (HARDIN SE)

NW	NC	NE
SW	SC	SE

WETLAND LEGEND

U – Primarily represents upland areas, but may include unclassified wetlands such as man-modified areas, non photo-identifiable areas and/or unintentional omissions.

M – MARINE

ECOLOGICAL SYSTEM
Ecological Subsystem
CLASS
Subclass

1 – Subtidal

RB ROCKY BOTTOM: 1 Bedrock; 2 Boulder
UB UNCONSOLIDATED BOTTOM: 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic
AB AQUATIC BED: 1 Submergent Algal; 2 Submergent Vascular; 3 Unknown Submergent
RF REEF: 1 Coral; 2 Worm
OW OPEN WATER: Unknown Bottom

2 – Intertidal

AB AQUATIC BED: 1 Submergent Algal; 2 Submergent Vascular; 3 Unknown Submergent
RF REEF: 1 Coral; 2 Worm
FL FLAT: 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic; 5 Vegetated Non-persist
RS ROCKY SHORE: 1 Bedrock; 2 Boulder; 3 Vegetated Non-persist
BB BEACH/BAR: 1 Cobble-Gravel; 2 Sand

E – ESTUARINE

1 – Subtidal

RB ROCKY BOTTOM: 1 Bedrock; 2 Boulder
UB UNCONSOLIDATED BOTTOM: 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic
AB AQUATIC BED: 1 Submergent Algal; 2 Submergent Vascular; 3 Floating Algal; 4 Floating Vascular; 5 Unknown Submergent; 6 Unknown Surface
RF REEF: 1 Mollusk; 2 Worm
OW OPEN WATER: Unknown Bottom

2 – Intertidal

AB AQUATIC BED: 1 Submergent Algal; 2 Submergent Vascular; 3 Floating Algal; 4 Floating Vascular; 5 Unknown Submergent; 6 Unknown Surface
RF REEF: 1 Mollusk; 2 Worm
FL FLAT: 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic; 5 Vegetated Persist; 6 Vegetated Non-persist
SB STREAMBED: 1 Cobble-Gravel; 2 Sand; 3 Organic
RS ROCKY SHORE: 1 Bedrock; 2 Boulder; 3 Vegetated Non-persist
BB BEACH/BAR: 1 Cobble-Gravel; 2 Sand
EM EMERGENT: 1 Persistent; 2 Nonpersistent; 3 Broad-leaved Persistent; 4 Broad-leaved Nonpersistent; 5 Needle-leaved Persistent; 6 Needle-leaved Nonpersistent; 7 Dead; 8 Mixed; 9 Vegetated
SS SCRUB-SHRUB: 1 Broad-leaved Deciduous; 2 Broad-leaved Evergreen; 3 Needle-leaved Deciduous; 4 Needle-leaved Evergreen; 5 Dead; 6 Deciduous; 7 Evergreen
FO FORESTED: 1 Broad-leaved Deciduous; 2 Broad-leaved Evergreen; 3 Needle-leaved Deciduous; 4 Needle-leaved Evergreen; 5 Dead; 6 Deciduous; 7 Evergreen

ECOLOGICAL SYSTEM
Ecological Subsystem
CLASS
Subclass

R – RIVERINE

1 – Tidal
2 – Lower Perennial
3 – Upper Perennial
4 – Intermittent
5 – Unknown Perennial

EM EMERGENT: 1 Nonpersistent; 2 Narrow-leaved Persistent; 3 Broad-leaved Persistent
RB ROCKY BOTTOM: 1 Bedrock; 2 Boulder
UB UNCONSOLIDATED BOTTOM: 1 Cobble-Gravel; 2 Sand; 3 Organic
AB AQUATIC BED: 1 Submergent Algal; 2 Submergent Vascular; 3 Floating Algal; 4 Floating Vascular; 5 Unknown Submergent; 6 Unknown Surface
FL FLAT: 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic; 5 Vegetated Persist; 6 Vegetated Non-persist
SB STREAMBED: 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic
RS ROCKY SHORE: 1 Bedrock; 2 Boulder
BB BEACH/BAR: 1 Cobble-Gravel; 2 Sand
OW OPEN WATER: Unknown Bottom

EM EMERGENTS are only found in the Riverine Tidal and Riverine Lower Perennial Ecological Subsystem. All other classes are found in all Riverine Ecological Subsystems.

ECOLOGICAL SYSTEM
Ecological Subsystem
CLASS
Subclass

L – LACUSTRINE

1 – Limnetic
2 – Littoral

RB ROCKY BOTTOM: 1 Bedrock; 2 Boulder
UB UNCONSOLIDATED BOTTOM: 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic
AB AQUATIC BED: 1 Submergent Algal; 2 Submergent Vascular; 3 Floating Algal; 4 Floating Vascular; 5 Unknown Submergent; 6 Unknown Surface
OW OPEN WATER: Unknown Bottom
FL FLAT: 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic; 5 Vegetated Persist; 6 Vegetated Non-persist
RS ROCKY SHORE: 1 Bedrock; 2 Boulder
BB BEACH/BAR: 1 Cobble-Gravel; 2 Sand
EM EMERGENT: 1 Nonpersistent; 2 Broad-leaved Nonpersistent

ECOLOGICAL SYSTEM
Ecological Subsystem
CLASS
Subclass

P – PALUSTRINE

RB ROCKY BOTTOM: 1 Bedrock; 2 Boulder
UB UNCONSOLIDATED BOTTOM: 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic
AB AQUATIC BED: 1 Submergent Algal; 2 Submergent Vascular; 3 Floating Algal; 4 Floating Vascular; 5 Unknown Submergent; 6 Unknown Surface
FL FLAT: 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic; 5 Vegetated Persist; 6 Vegetated Non-persist
MS MOSS LICHEN: 1 Moss; 2 Lichen
EM EMERGENT: 1 Persistent; 2 Nonpersistent; 3 Broad-leaved Persistent; 4 Broad-leaved Nonpersistent; 5 Narrow-leaved Persistent; 6 Narrow-leaved Nonpersistent; 7 Dead; 8 Deciduous; 9 Evergreen
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Tidal	Tidal	Coastal Salinity	Inland Salinity	pH Modifiers for all Fresh Water	1 Organic; 2 Mineral	Beaver; Partially Drained/Ditched; Farmed; Diked/Impounded; Artificial; Excavated
Subtidal; Permanently Flooded; Intermittently Exposed/Permanent; Semipermanently Flooded; Intermittently Exposed/Semipermanent; Seasonally Flooded; Saturated; Temporary Flooded; Intermittently Flooded; Artificial Flooded; Intermittently Flooded/Temporary; Saturated; Seasonally Flooded; Temporary Flooded-Tidal; Intermittently Flooded-Tidal; Artificial	Subtidal; Irregularly Exposed; Regularly Flooded; Irregularly Flooded	1 Hyperhaline; 2 Euhaline; 3 Mixohaline (Brackish); 4 Polyhaline; 5 Mesohaline; 6 Oligohaline; 7 Fresh	1 Hyperhaline; 2 Euhaline; 3 Mixohaline; 4 Fresh	Acid; Circumneutral; Alkaline		

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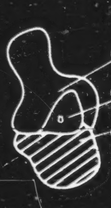

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